

澳門介入診療學會

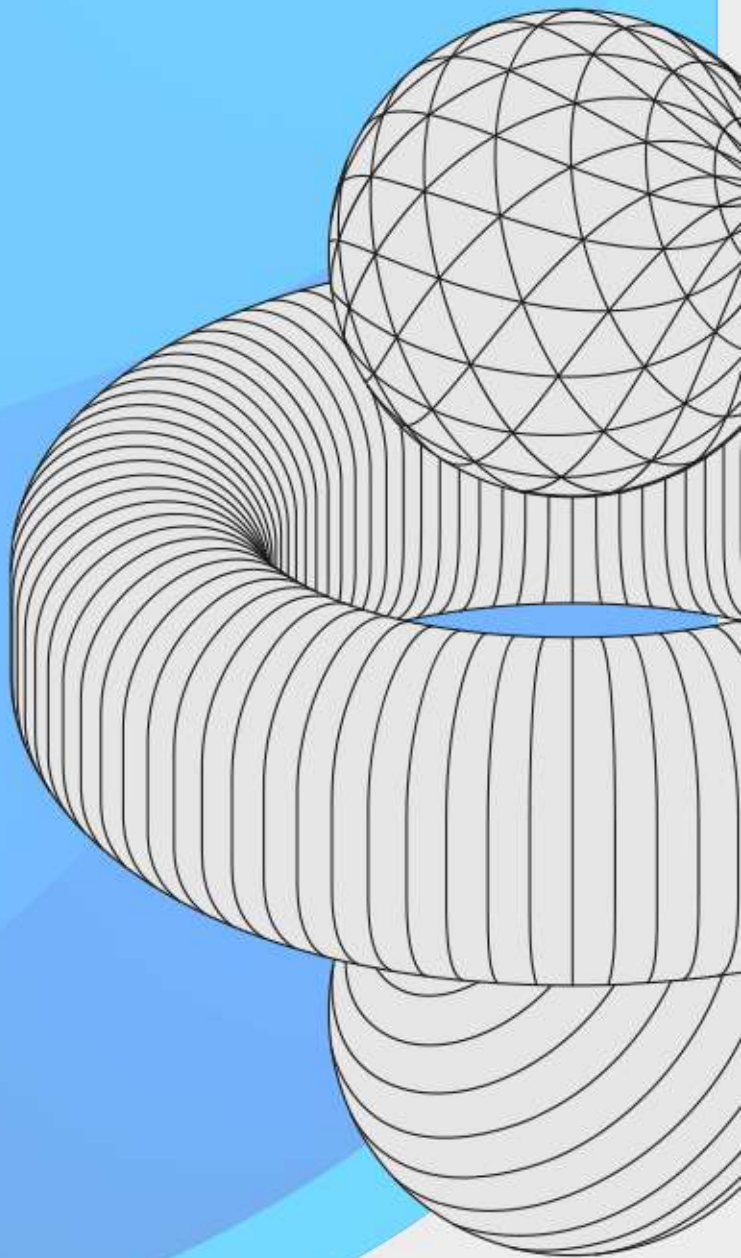
學術年會

2024 FEB 25 (SUNDAY)

Associação de Diagnóstico e de Terapêutica de Intervenção de Macau

VENUE : MGM MACAU - GRAND BALLROOM

Associação de Diagnóstico e de Terapêutica de Intervenção de Macau - Annual Scientific Conference 2024



Welcoming Speech

在現代醫學中，介入治療是一種重要且不斷發展的治療方法，它通過使用影像引導和微創技術，進行診斷、治療和疾病管理。這種治療方式，通常適用於那些傳統手術風險較高的患者，同時也可以提供更快速、更有效的治療選項。

醫學介入治療的應用範圍非常廣泛，涵蓋了多個臨床領域，如心血管病學、神經學、腫瘤學、胃腸科學等，常見的介入治療技術包括血管內介入、導管介入、射頻消融、微波消融、超聲消融、介入放射治療等。其發展得益於不斷創新的技術和設備，如影像引導系統、導管導向系統、微創手術工具等。這些先進的技術和設備使醫生能夠準確地定位和操作，並且在治療過程中監測和評估治療效果。

儘管如此，醫學介入治療作為現代醫學的一個重要分支，對於改善患者的生活質量、提供有效的治療選擇以及推動醫學技術的進步具有重要意義。隨著技術的不斷發展和研究的深入，相信醫學介入治療將繼續在未來發揮更大的作用，為病人帶來更好的治療效果和健康福祉。

今年是澳門介入診療學會第二年舉辦學術交流活動，我們仍然不斷學習和改善質素，為澳門醫療發展貢獻力量。

In modern medicine, medical interventional therapy is an important and evolving treatment method that uses image-guided and minimally invasive techniques for diagnosis, treatment, and disease management. This treatment is often suitable for patients who are riskier or impractical with traditional surgery, but can also provide a quicker and more effective treatment option.

The application scope of medical interventional therapy is wide, covering multiple clinical fields such as cardiology, neurology, oncology, gastrointestinal science. Common interventional treatment techniques include endovascular intervention, catheter intervention, radiofrequency ablation, microwave ablation, ultrasound ablation, interventional radiation therapy.

The development of medical interventional therapy benefits from continuous innovation in technology and equipment, such as image-guided systems, catheter-guided systems, minimally invasive surgical tools, etc. These advanced technologies and equipment allow physicians to accurately locate and operate, as well as monitor and evaluate treatment effects during treatment.

Nevertheless, medical interventional therapy, as an important branch of modern medicine, is of great significance for improving the quality of life of patients, providing effective treatment options, and promoting the advancement of medical technology. With the continuous development of technology and in-depth research, it is believed that medical interventional therapy will continue to play a greater role in the future, bringing better treatment effects and health well-being to patients.

This is the second year that the Macau Interventional Diagnosis and Treatment Association has organized academic conference. We will continue to learn and improve the quality, and contribute to the development of medical care in Macao.



LAM U Po
President

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AGENDA

AGENDA (MEDICAL)

Chairperson: LAM U Po, Mario EVORA, NG Hou, Kyl Soe

09:30-10:00	Sedentary Behaviour as a Risk Factor for Cardiovascular Disease	Humberto EVORA
10:00-10:30	New Frontier in Hybrid Patient Management: PCI, Pacing and Structural Heart	LAM Cheung Chi, Simon
10:30-11:00	Use of Intra-coronary Imaging in Complex PCI	TAM Chor Cheung, Frankie
11:00-11:30	Quintuple Therapy for Heart Failure Management	HO Kwok Tung, Gordon
11:30-12:00	Opening Speech Group Photo	LAM U Po

LUNCH SYMPOSIUM

Chairperson: JIN Chun, Edmundo LAO

12:00 - 12:30	Optimising HF Management: Is it Time to Treat HF regardless of Ejection Fraction?	TSE Hung Fat
12:30 - 13:00	What We Learn from a Decade of NOAC Usage	Bonaventure IP

Chairperson: KONG Kuan Kei, SI Wai Tat, LEONG Iat Lon

13:30 - 14:00	Treatment of Cerebral Venous Sinus Thrombosis	LIAO Ting
14:00 - 14:30	Sustained LDL-C Control with siRNA	WONG Yiu Tung, Anthony
14:30 - 15:00	Interpreting the Latest Guidelines in ACS	FUNG Chi Yin, Raymond

15:00 - 15:30 *Tea Break*

Chairperson: KONG Soi Chau, TAM Weng Chio, JIANG Xiao Fei

15:30 - 16:00	脈衝消融房顫的現狀及展望	薛玉梅
16:00 - 16:30	無植入·更安心: BA9在DCB中的應用優勢	馬禮坤
16:30 - 17:00	假性動脈瘤的介入處理	梁溢貞
17:00	Closing Remarks	KONG Soi Chau

AGENDA (NURSING)

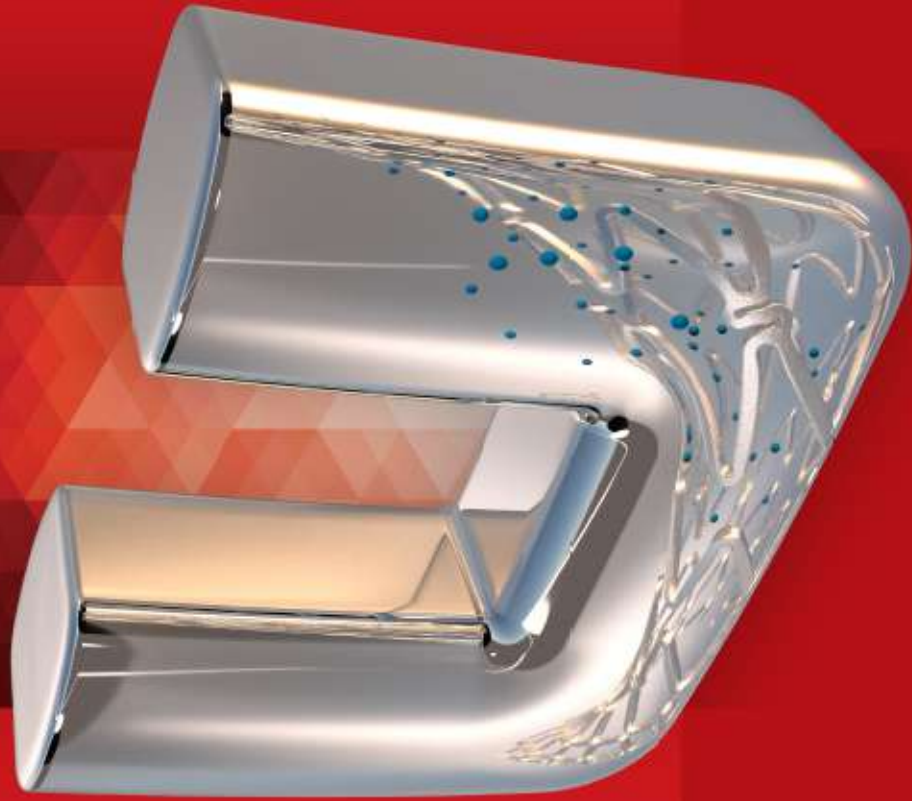
Chairperson: CHEONG Pak Leng, TAM Wai Keong, MAK Weng lan

13:30 - 14:00	Hemodynamic Monitoring of Macrocirculation, Microcirculation and Cellular Metabolism.	CHAN Wing Keung, David
14:00 - 14:30	Challenges to Nurses in Primary PCI	HO Kam Tak, Camille
14:30 - 15:00	Sharing on STEMI and AIS Management in Hong Kong, from pre-hospital to A&E	KWOK Shing Lam, Sirius

15:00 - 15:30 *Tea Break*

Chairperson: CHEONG Pak Leng, LEONG Iok San, WONG Yuen Kwan

15:30 - 16:00	Scientific Research Methods and Their Application in the Nursing Profession	LUK HI Kwan, Bronya
16:00 - 16:30	Nursing Management of Patients with IMPELLA	TAM Wai Keong
16:30 - 17:00	Caring for Patients of Transcatheter Aortic Valve Replacement	WANG Yan



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Sedentary Behaviour as a Risk Factor for Cardiovascular Disease

Humberto Évora



Medical studies in Lisbon Faculty of Medicine
Specialist in SPORTS MEDICINE in Rome Italy Sports Medicine Institute

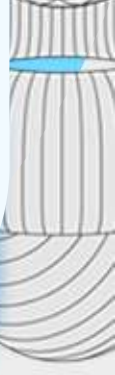
BIOGRAPHY

In Macau was:

Director of Macau Sports Medicine Center
President of Macau Association of Sports Medicine
Chief Consultant in CHCSJ-MFR
Member of ANOCA (International Medical Anti doping Commission)
Medical doctor of Macau Olympic Committee
Senior Aviation Medical Examiner

After leaving Macau;

Chief Medical Doctor of Cabo Verde Olympic Committee
Chief Medical Doctor of Cabo Verde Football Federation (until 2021)



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- Protects against the combined risk of CV death and HFH (ARR:4.2%; NNT:24)^{1,2}
- Is a well-tolerated treatment with no significant difference in symptomatic hypotension compared to placebo^{2,4}

Verquovo[®] is indicated for the treatment of symptomatic chronic heart failure in adult patients with reduced ejection fraction who are stabilised* after a recent decompensation event requiring IV therapy.¹

A worsening HF event is defined as a heart failure hospitalization or outpatient IV diuretic use for heart failure.²

† Following a worsening HF event.

* Not having administration of any intravenous treatment within 24 hours, and/or systolic blood pressure (SBP) <100 mmHg or symptomatic hypotension²

Study design: VICTORIA is a phase 3, randomized, double-blind, placebo-controlled trial involved 5050 patients that evaluated the efficacy and safety of Verquovo[®] (target dose, 10 mg once daily) versus placebo in patients with symptomatic chronic HF and an ejection fraction of <45%, in addition to guideline-based medical therapy. Patients also had to have worsening heart failure.^{2,3} The primary outcome was a composite of death from CV causes or first hospitalization for HF.^{2,3} The median follow-up period was 10.8 months.²

Verquovo[®] 2.5 / 5 / 10 mg film-coated tablets

Abbreviated Prescribing Information

(Please refer to the full prescribing information before prescribing)

Indication for Use: Treatment of symptomatic chronic heart failure in adult patients with reduced ejection fraction who are stabilised after a recent decompensation event requiring IV therapy. **Composition:** Active ingredient: 2.5 mg/5 mg/10 mg vericiguat. Excipients: microcrystalline cellulose, croscarmellose sodium, hypromellose 2910, lactose monohydrate, magnesium stearate, sodium laurylsulfate, talc, titanium dioxide (E 171), iron oxide red (E 172) (Verquovo[®] 5 mg only), iron oxide yellow (E 172) (Verquovo[®] 10 mg only). **Poology and Method of Administration:** For oral use and should be taken with food. Vericiguat is administered in conjunction with other heart failure therapies after stabilisation. The recommended starting dose is 2.5 mg vericiguat once daily, and should be doubled approximately every 2 weeks to reach the target maintenance dose of 10 mg once daily, as tolerated by the patient. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients; Concomitant use of other soluble guanylate cyclase (sGC) stimulators, such as riociguat. **Warnings and Precautions:** Symptomatic hypotension: Vericiguat may cause symptomatic hypotension. Patients with SBP <100 mmHg or symptomatic hypotension at treatment initiation were not studied. The potential for symptomatic hypotension should be considered in patients with hypovolaemia, severe left ventricular outflow obstruction, resting hypotension, autonomic dysfunction, history of hypotension, or concomitant treatment with antihypertensives or organic nitrates. If patients experience tolerability issues (symptomatic hypotension or SBP <90 mmHg), temporary down-titration or discontinuation of vericiguat is recommended. Concomitant use of vericiguat and PDE5 inhibitors has not been studied in patients with heart failure and is therefore not recommended due to the potential increased risk for symptomatic hypotension; **Renal Impairment:** treatment with vericiguat is not recommended in patients with eGFR <15 mL/min/1.73 m² at treatment initiation or on dialysis; **Hepatic Impairment:** treatment with vericiguat is not recommended in patients with severe hepatic impairment; **Excipients:** This medicinal product contains lactose and sodium (<1 mmol sodium per tablet). **Adverse effects:** Very common (≥1/10): hypotension; Common (≥1/100 to <1/10): anaemia, dizziness, headache, nausea, dyspepsia, vomiting, gastro-oesophageal reflux disease. For uncommon and rare adverse reactions, please refer to the full prescribing information (Dec 2021). (MA-M_VER-HK-0052-1 Aug 2022)

References

1. Verquovo[®] 2.5 / 5 / 10 mg film-coated tablets Hong Kong prescribing information (Dec 2021). 2. Armstrong PW, et al. NEJM 2020;382(20):1883-1893. 3. Armstrong PW, et al. JACC Heart Fail. 2018;6(2):96-104. 4. Lam CSP, et al. J Am Heart Assoc. 2021 Nov 16;10(22):e021094.



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Footnotes:

ARR: absolute risk reduction. CV: cardiovascular. HF: heart failure. HFH: heart failure hospitalization. IV: intravenous. MOA: mechanism of action. NO-sGC-cGMP: nitric oxide-soluble guanylate cyclase-cyclic guanosine monophosphate. NNT: number needed to treat.



New Frontier in Hybrid Patient Management: PCI, Pacing and Structural Heart

LAM Cheung Chi, Simon



Dr. Simon Cheung-Chi LAM (Hong Kong, China)
Consultant
Queen Mary Hospital, The University of Hong Kong

BIOGRAPHY

Dr. Simon Cheung-chi Lam is Consultant Cardiologist and Honorary Clinical Associate Professor from Queen Mary Hospital, Hong Kong. He completed his medical degree in the University of Hong Kong and received his post-fellowship training in Structural and Congenital Heart Intervention in Cardiovascular Center Frankfurt, Germany under Prof. Horst Sievert in 2012-2013.

His special interests include transcatheter aortic valve implantation, percutaneous mitral and tricuspid valves repair, TMVR, TTVR, transcatheter electrosurgery, complex percutaneous coronary intervention, intracoronary imaging, and adult congenital heart disease. His latest experiences include transfemoral J-valve for pure aortic regurgitation and LUX Valve Plus Tricuspid Valve Replacement, and bench testing for innovation development and training platforms in transcatheter electrosurgery and heart valve interventions. He is the course director of QMH OCT-COE Course and



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LDL-C, low-density lipoprotein-cholesterol; PCSK9i, proprotein convertase subtilisin/kexin type 9 inhibitor
Ref. 1. Praluent Prescribing Information, Jun 2022. 2. Ruth et al. *atherosclerosis* 2016; 254: 254-262

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(20220701-01)0002-01-L041



Use of Intra-coronary Imaging in Complex PCI

TAM Chor Cheung, Frankie



BIOGRAPHY

Dr Frankie Tam graduated from the University of Hong Kong in 2005. He received his training in Cardiology in Queen Mary Hospital Hong Kong and went to Harrington Heart and Vascular Institute, Cleveland, USA for overseas training in advanced interventional cardiology. He is currently the Consultant in Queen Mary Hospital and Honorary Clinical Associate Professor in University of Hong Kong. His special interest is in management of acute coronary syndrome, complex coronary intervention and structural heart disease intervention.





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Quintuple Therapy for Heart Failure Management

HO Kwok Tung, Gordon



Postgraduate Training and Positions Held

- 2019 to current Consultant in Cardiology, Hong Kong Adventist Hospital, Tsuen Wan
- 2013 to 2019 Associate Consultant (Cardiologist), Department of Medicine, Yan Chai Hospital
- 2011 to 2013 Resident Specialist (Cardiologist), Department of Medicine and Geriatrics, United Christian Hospital
- 2003 to 2011 Resident, Department of Medicine and Geriatrics, United Christian Hospital
- Advanced Physician Training in Cardiology
 - Basic Physician Training
- 2002 Intern
- Department of Pediatrics, Caritas Medical Center (Oct to Dec)
 - Department of Orthopedics, Pamela Youde Nethersole Eastern Hospital (Jul to Sep)
 - Department of Medicine, Alice Ho Miu Ling Nethersole Hospital (Apr to Jun)
 - Department of Surgery, Yan Chai Hospital (Jan to Mar)

Medical Degree and Postgraduate Qualifications

- 2011 Fellowship of the Hong Kong Academy of Medicine (FHKAM), Hong Kong Academy of Medicine
- 2011 Fellow Hong Kong College of Physicians (FHKCP), Hong Kong College of Physicians
- 2006 Diploma in Geriatric Medicine, Royal College of Physicians and Surgeons of Glasgow
- 2006 Membership of the Royal Colleges of Physicians of the United Kingdom (MRCP), Royal College of Physicians, United Kingdom
- 2002 Bachelor of Medicine and Bachelor of Surgery (MBBS), University of Hong Kong

Presentations and Publications

- 2023 Panelist for Cardiovascular Intervention Fellow Course 11, Hong Kong College of Cardiology
Speaker for Sepsis Day, Hong Kong Adventist Hospital, Tsuen Wan
- 2022 Chairperson for Workshop for Allied Healthcare Professionals, 9th Asian Preventive Cardiology & Cardiac Rehabilitation Conference
- 2019 Chairperson and Poster Judge for 27th Annual Scientific Congress, Hong Kong College of Cardiology
Speaker for CHIP Hong Kong, HKSTENT (The Spectrum of Supporting Devices)
Panelist for General Cardiology Case Presentation Forum 2019, Hong Kong Public Hospital Cardiologists Association
- 2018 ePoster Presentation for Canadian Cardiovascular Congress 2018
Case Presentation for Challenging Cases, Transcatheter Cardiovascular Therapeutics 2018
Case Presentation for City Wide Interventional Cardiology Journal Club, Edmonton: Mechanical Circulatory Support in ChiP
- 2017 Panelist and Commentator for Taiwan Transcatheter Therapeutics 2017
Faculty and Panelist for 12th Asian Interventional Cardiovascular Therapeutics 2016

- 2016 Poster Judge for 6th Asian Preventive Cardiology & Cardiac Rehabilitation Conference, Hong Kong College of Cardiology
- 2015 Best PCI Case Award in Hong Kong Heart Foundation: PCI Case Competition, Cardiovascular Interventional Summit 2015 (Retrieve of a dislodged stent)
- 2014 Case Presentation for Hong Kong Society of Transcatheter Endo-cardiovascular Therapeutics (HK-STENT) Cardiovascular Intervention Complication Forum 2014: Nightmare in New Year's Eve (RCA Dissection)
Faculty and Panelist, 3rd CTO Live Hong Kong, Hong Kong Public Hospital Cardiologists Association
- 2013 Guest Faculty and Case Presentation for AsiaPCR SingLIVE
Speaker for Hands-on Workshop for Hand-Held Cardiac Ultrasound, United Christian Hospital
Speaker for Allied Cardiovascular Health Professionals Symposium – Cardiopulmonary Resuscitation 2013, Annual Scientific Congress, Hong Kong College of Cardiology
Speaker for Post-registration Certificate Course in Advanced Medical Nursing, United Christian Hospital
- 2012 Speaker for Hands-on Workshop for Hand-carried Cardiac Ultrasound, United Christian Hospital
BEST Presentation Award in Annual Scientific Congress, Hong Kong College of Cardiology – PCI Case Presentation: A sad outcome of a lady after PCI (stent thrombosis)
Invited Speaker for Anesthesiology CME Programme and Echo Workshop, Hong Kong Sanatorium & Hospital
Case Presentation for AMI Work-shop, HKSTENT: Cases of slow flow and no re-flow
- 2011 Speaker for Post-registration Certificate Course in Advanced Medical Nursing, United Christian Hospital
- 2010 Case Presentation and abstract publication in Annual Scientific Congress, Hong Kong College of Cardiology: A Case Series of Using Drug Eluting Balloon for In-Stent Restenosis
Case Presentation in PCI workshop: DEB vs DES in Coronary Intervention
Moderator for Asia Pacific Arrhythmia Experts Forum, Society of Pacing and Cardiac Electrophysiology of Malaysia
- 2009 Case Presentation and abstract publication in Annual Scientific Congress, Hong Kong College of Cardiology: Oral Glucose Tolerance Test Screening for Acute Coronary Syndrome Patients Without History of Diabetes Mellitus

Contributions to Department Development

- 2013 Organizer of Hands-on Workshop for Hand-Held Cardiac Ultrasound 2013, United Christian Hospital
- 2012 Organizer of Hands-on Workshop for Hand-carried Cardiac Ultrasound 2012, United Christian Hospital
Document Control for Division of Cardiology, M&G, United Christian Hospital

Clinical Trials and Research Experience

- 2013 Investigator of Influence of total atherosclerotic burden assessed by 3-vessel fractional flow reserve (FFR) on the clinical outcomes of the patients with multi-vessel disease
- 2012 Co-investigator of "SIGNIFY", Study assessing the morbidity-mortality benefits of the I₁ inhibitor ivabradine in patients with coronary artery disease

Overseas Training Experience

- 2018 Clinical Fellow in Interventional Cardiology, CK Hui Heart Centre, Royal Alexandra Hospital, affiliated with the Faculty of Medicine, University of Alberta, Canada (Benjamin Tyrrell MD)
The London Advanced Cardiac CT Academy, Guy's and St Thomas', UK (Ronak Rajani MD)
- 2017 Osaka OFDI Workshop, Saiseikai Nakatsu Hospital, Japan (Dr. Junya Shite)
- 2016 Interventional Cardiology International Course, Tokai University Hospital, Japan (Prof. Yuji Ikari)
- 2015 Preceptorship Program on CRT Implantation, Semmelweis University Heart Center, Budapest, Hungary (Prof. Bela Merkely, Dr. Laszlo Geller)
- 2014 Preceptorship Program on PCI Procedures, Werner Forssmann Hospital, Eberswalde, Germany (Dr. Stefan Hoffmann)
- 2013 Rotablator & IVUS Training Course in MIYAZAKI, Miyazaki Medical Association Hospital, Institute MIYAZAKI (Yoshisato Shibata MD, Kenichi Tsujita MD, Takashi Ashikaga MD)
- 2012 Boston Scientific MEET THE MASTERS Practical Aspects of Heart Rhythm Management and Transition to Practice (Tohru Ohe MD, Chu Pak Lau MD)
- 2009 Advance Interventional Crossroads Training Programme, Crossroads Institute (Robaayah Zambahari MD)
- 2008 Update in Clinical Cardiology, Department of Continuing Education, Harvard Medical School (Sanjiv Chopra, MBBS)

Heart failure (HF) imposes a significant impact and burdens on patients, healthcare professionals and the healthcare systems. It is a highly prevalent disease associated with elevated risk of morbidity and mortality. HF progression is typically punctuated by repeated worsening HF events, which markedly deteriorates patient prognosis. About 1 in 7 patients on quadruple standard of care (SoC) therapy remained at risk of worsening HF and CV death. Such residual risk implies the need of additional therapy for management of worsening HF.

Worsening HF has been recognized as a distinct phase in heart failure. In 2023, Heart Failure Association of the European Society of Cardiology (ESC-HFA) published a consensus statement sharing a more concrete definition and treatment suggestion for worsening heart failure. The site of care extended from hospitalization to out-patient setting, with vericiguat being one of the recommendation for preventing worsening events. Journal of the American College of Cardiology (JACC) also published a recommendation for worsening HF, advising quintuple therapy with GDMT and vericiguat for worsening HF patients.

Vericiguat provides a new and different approach to manage HF following a worsening event. It works on the NO-sGC-cGMP pathway, an untapped pathway implicated in the development and progression of HF on top of SoC therapy as a holistic treatment approach for HF management. By restoring the NO-sGC-cGMP pathway, vericiguat has the potential to improve HF pathophysiology in the heart, blood vessels and kidneys.

ABSTRACT

From VICTORIA study, a phase 3, randomized, double-blind, placebo-controlled trial involved 5050 patients evaluated the efficacy and safety of vericiguat versus placebo in patients with symptomatic chronic HF and an ejection fraction of <45%, in addition to SoC therapy. Vericiguat significantly reduced the primary composite outcome of first HF hospitalization or CV death. It is well tolerated with 90.3% patients achieved targeted maximum dose of 10mg. There was minimal impact on systolic blood pressure, as well as no clinically relevant impact on renal function, sodium and potassium levels over time. With the evidence supported, vericiguat is the pharmacological therapy to be specifically recommended for the comprehensive medical treatment of patients following a worsening HF event across international guidelines.





Optimising HF Management: Is it Time to Treat HF regardless of Ejection Fraction?

TSE Hung Fat

**Prof. Tse Hung-Fat, MBBS, MD, PhD, FACC, FRCP, FESC
BIOGRAPHY**

Prof. Hung-Fat Tse is Chair Professor of Cardiovascular Medicine, and William MW Mong Professor in Cardiology; Chairpersons and Chief of Service of the Department of Medicine; Chief in the Cardiology Division, Department of Medicine, Queen Mary Hospital; Co-director, Cardiac & Vascular Center, The University of Hong Kong - Shenzhen Hospital. He is also the academic lead, HKUMed Laboratory of Cellular.

Therapeutics, The University of Hong Kong. He is a clinician scientist and an international expert in cardiovascular medicine, including cardiac pacing, clinical electrophysiology, and cardiovascular regeneration. Prof. Tse is one of the pioneers for novel therapies, including stem cell and devices for treatment of cardiovascular diseases. He has established the large animal laboratory for cardiovascular research as well the "Good Manufacturing Practice" laboratory for human stem cells and biological therapies in the University of Hong Kong. He has been awarded multiple major local grants (including the Theme Based Research Grant, Research Impact Fund and Innohealth) as well as national research grants (National Natural Science Foundation of China and 973 grants) for his researches. He has been participated into many international and regional clinical trials and studies, and is currently the Associate Editors for several international journals, including Cardiovascular Diabetology, Frontier in Cardiovascular Medicine, Journal of Cardiovascular Electrophysiology, Pacing and Clinical Electrophysiology and Journal of Arrhythmia. He has published over 730 scientific publications in international top-ranking scientific journals, including New England Journal of Medicine, Lancet, Nature Medicine, Nature Cell Biology, Nature Genetic, Nature Protocol, Nature Communication, Nature Biomedical Engineering, Nature Disease Primer, Cell Stem Cell, Circulation, Journal of American College of Cardiology, and European Heart Journal.

ABSTRACT

Heart failure is a progressive and devastating illness that affects 60 million individuals worldwide, and its prevalence is expected to rise due to the aging population. The treatment of heart failure currently faces a significant unmet need, as approximately half of those diagnosed with the condition are projected to pass away within five years.

Sodium-glucose cotransporter 2 (SGLT2) inhibitors, such as empagliflozin, have been shown to significantly decrease the risk of cardiovascular death or hospitalization for heart failure in patients with chronic heart failure, both with a reduced left ventricular ejection fraction (LVEF) and a preserved LVEF.

Furthermore, the EMPULSE study demonstrated that empagliflozin can be initiated in the hospital setting for patients with acute heart failure following stabilization. This study provided evidence of clinical benefits for both acute new-onset heart failure and worsening chronic heart failure, regardless of ejection fraction or the presence of diabetes.

This lecture will cover the most recent clinical evidence regarding the use of SGLT2 inhibitors in this context and provide practical guidance for their implementation.

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* Approved - Jardiance 10mg is indicated in adults for the treatment of symptomatic chronic heart failure in Macau

¹ Adult patients with chronic heart failure (NYHA class II, III, or IV) and reduced ejection fraction (LVEF ≤ 40%). Adult patients with chronic heart failure (NYHA class II, III, or IV) and preserved ejection fraction (LVEF > 40%).^{†1}

² In the EMPEROR-Preserved trial, a randomised, double-blind, parallel-group, placebo-controlled study of 5988 patients with HFpEF, the efficacy and safety of JARDIANCE 10 mg (n=2997) were evaluated vs placebo (n=2991). The primary endpoint in the EMPEROR-Preserved trial was a composite of CV death or HHF, analysed as time to the first event. Patients treated with JARDIANCE experienced a 21% RRR in this endpoint (HR=0.79; 95% CI: 0.69, 0.90; p<0.001). In the EMPEROR-Reduced trial, a randomised, double-blind, parallel-group, placebo-controlled study of 3730 patients with HFrEF, the efficacy and safety of JARDIANCE 10 mg (n=1863) were evaluated vs placebo (n=1867). The primary endpoint in the EMPEROR-Reduced trial was a composite of CV death or HHF, analysed as time to the first event. Patients treated with JARDIANCE experienced a 25% RRR in this endpoint (HR=0.75; 95% CI: 0.65, 0.86; p<0.001).^{†2}

³ In the EMPEROR-Reduced trial, a randomised, double-blind, parallel-group, placebo-controlled study of 3730 patients with HFrEF, the efficacy and safety of JARDIANCE 10 mg (n=1863) were evaluated vs placebo (n=1867). The primary composite endpoint in the EMPEROR-Reduced trial was a composite of CV death or HHF, analysed as time to the first event. Patients treated with JARDIANCE experienced a 25% RRR in this endpoint (HR=0.75; 95% CI: 0.65, 0.86; p<0.001).^{†3}

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⁵ When Jardiance is used in combination with a sulphonylurea or with insulin, a lower dose of the sulphonylurea or insulin may be considered to reduce risk of hypoglycaemia.⁵

^{**} The SGLT2i class, such as Jardiance, has gained a 1A recommendation for HFpEF and a 2a-B-R recommendation for HFrEF and HFmrEF.⁴

CI=confidence interval; CV=cardiovascular; HFpEF=heart failure with preserved ejection fraction; HFrEF=heart failure with reduced ejection fraction; HFmrEF=heart failure with mid range ejection fraction; HHF=hospitalisation for heart failure; HR=hazard ratio; LVEF=left ventricular ejection fraction; NYHA=New York Heart Association; RRR=relative risk reduction; SGLT2i=sodium-glucose cotransporter 2 inhibitor

JARDIANCE[®] Abbreviated Prescribing Information (aPI-JARD-03)

Presentation: Empagliflozin, Film-coated tablets 10 mg; 25 mg. **Indications:** 10 mg and 25 mg: Indicated in the treatment of type 2 diabetes mellitus to improve glycaemic control in adults as: monotherapy when diet and exercise alone do not provide adequate glycaemic control in patients for whom use of metformin is considered inappropriate due to intolerance; and as add-on combination therapy with other glucose-lowering medicinal products including insulin, when these, together with diet and exercise, do not provide adequate glycaemic control. Indicated in patients with type 2 diabetes mellitus and established cardiovascular disease to reduce the risk of cardiovascular death. 10 mg: Jardiance is indicated in adults for the treatment of symptomatic chronic heart failure. **Dosage and administration:** Type 2 diabetes mellitus: 10 mg once daily. In patients tolerating 10 mg once daily and requiring additional glycaemic control, the dose can be increased to 25 mg once daily. Can be taken with or without food. No dose adjustment is required for patients with eGFR ≥ 30 mL/min/1.73m² or with hepatic impairment, or for elderly patients. **Heart Failure:** 10 mg once daily. Can be taken with or without food. In HF patients with or without T2DM, 10 mg may be initiated or continued down to an eGFR of 20 mL/min/1.73m² or CrCl of 20 mL/min. **Contraindication:** Hypersensitivity to empagliflozin or any of the excipients. For the treatment of Type 2 diabetes, JARDIANCE should not be used in patients with severe renal impairment (eGFR < 30 mL/min/1.73m²), end-stage renal disease and patients on dialysis. **Special warnings and precautions:** Should not be used in patients with type 1 diabetes or for treatment of ketoacidosis. Discontinue immediately when ketoacidosis is suspected or diagnosed. Treatment should be interrupted in patients who are hospitalised for major surgical procedures or acute serious medical illnesses, and may be restarted once the patient's condition has stabilised. For type 2 diabetes mellitus, should not be used in patients with severe renal impairment (eGFR < 30 mL/min/1.73m²), end-stage renal disease and patients on dialysis. For HF, not recommended for use when eGFR < 20 mL/min/1.73m². Discontinue in cases of recurrent UTI. Due to a risk of modest decrease in blood pressure, caution should be exercised in patients with known cardiovascular disease, patients on diuretics, patients with history of hypotension or patients aged 75 years and older. Monitoring of volume status and electrolytes is recommended. Regularly examine the feet and counsel patients on routine preventative footwear. Caution is advised in patients at increased risk of genital infections. Avoid use during pregnancy and breast-feeding. Safety and effectiveness in children under 18 years of age have not been established. Initiation is not recommended in patients aged 85 years and older. Urine will test positive for glucose while patients are taking JARDIANCE. **Interactions:** Risk of dehydration and hypotension may increase when used in combination with thiazide and loop diuretics. Lower dose of insulin or an insulin secretagogue may be required to reduce the risk of hypoglycaemia when used in combination with JARDIANCE. Empagliflozin may increase renal lithium excretion and the blood lithium levels may be decreased. Serum concentration of lithium should be monitored more frequently after empagliflozin initiation and dose changes. **Adverse reactions:** Hypoglycaemia (depends on type of background therapy of patients); Urinary tract infection, vaginal moniliasis, vulvovaginitis, balanitis and other genital infection; increased urination, dysuria, constipation; Pruritus; Volume depletion; Thirst; Glomerular filtration rate decreased; blood creatinine increased; haematocrit increased; serum lipids increased. Post-marketing experience: Ketoacidosis, pyelonephritis, sinusitis, necrotising fasciitis of the perineum (Fournier's gangrene), allergic skin reaction, angioedema, phimosi. **Storage condition:** Please refer to outer packaging for special precautions for storage. **Note:** Before prescribing, please consult full prescribing information.

References: 1. Anker SD, Butler J, Filippatos G, et al; EMPEROR-Preserved Trial Investigators. Empagliflozin in heart failure with a preserved ejection fraction. *N Engl J Med.* 2021;385(6):1451-1461. (EMPEROR-Preserved results and the publication's Supplementary Appendix.) 2. Packer M, Anker SD, Butler J, et al; EMPEROR-Reduced Trial Investigators. Cardiovascular and renal outcomes with empagliflozin in heart failure. *N Engl J Med.* 2020;383(15):1413-1424. (EMPEROR-Reduced results and the publication's Supplementary Appendix.) 3. Jardiance Hong Kong Prescribing Information. 4. Heldenreich PA, Bouillon B, Agutter D, et al. 2022 AHA/ACC/HFSA guideline for the management of heart failure: executive summary: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines [Epub ahead of print]. *J Am Coll Cardiol.* 2022. doi:10.1016/j.jacc.2021.12.011

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What We Learn from a Decade of NOAC Usage

Bonaventure IP

BIOGRAPHY

Dr. Bonaventure Ip obtained his Bachelor of Medicine and Bachelor of Surgery (MBChB) from The Chinese University of Hong Kong. He is a stroke interventionist serving as a clinical assistant professor at the Faculty of Medicine, CUHK. Dr. Ip's expertise covers anticoagulation, stroke-related big data analytics, advanced neuroimaging and endovascular intervention. Dedicated to research, Dr. Ip had authored multiple peer-reviewed publications in Science Robotics, JAMA Network Open, Neurology, Stroke and International Journal of Stroke. He received the Best Free Paper Award and Best Dissertation Award in the Hong Kong Neurological Society Annual Scientific Meeting (2021, 2019) and has been elected as an exemplary teacher and best teacher multiple times by the Faculty.

ABSTRACT

Over a decade has transpired since the groundbreaking trial of the initial direct oral anticoagulant (DOAC). The efficacy of DOAC as a preventive measure against nonvalvular atrial fibrillation-induced stroke is well-established. However, the usage of DOAC has given rise to new and common clinical scenarios, prompting clinicians to seek answers to pertinent questions. These questions include: (i) which DOAC is most suitable for my patients? (ii) what course of action should be taken if a patient experiences an ischemic stroke while on DOAC therapy? (iii) how should a patient be managed if they suffer a hemorrhagic stroke while on DOAC therapy? In this lecture, we aim to address these frequently asked questions by presenting a comprehensive analysis of randomized trials, observational studies, and animal data. By doing so, we hope to provide valuable insights and guidance to healthcare practitioners grappling with these clinical challenges.

PRESCRIBING PRADAXA[®] (dabigatran etexilate) IS THINKING AHEAD¹⁻³

The confidence of evidence with the reassurance of reversal^{2,4-6}

Pradaxa[®]
dabigatran etexilate

Praxbind[®]
idarucizumab



References: 1. Pradaxa Hong Kong prescribing information. 2. Pollack CV, et al. *N Engl J Med* 2017; 377: 431–41. 3. Connolly SJ, et al. *N Engl J Med* 2009; 361: 1139–51. 4. Larsen TB, et al. *BMJ* 2016; 353: i3189 (and supplementary material). 5. Nielsen PB, et al. *BMJ* 2017; 353: j5110. 6. Rogers KC, et al. *Cardiol Rev* 2016; 24(6): 310–15.

Abbreviated Prescribing Information PRADAXA[®] (dabigatran etexilate)

Presentations: Dabigatran etexilate (Prax) Capsules, 75mg, 110mg, 150mg. **Indications:** Prevention of stroke and systemic embolism in adult patients with non-valvular atrial fibrillation (NVAF), with one or more risk factors, such as prior stroke or transient ischaemic attack (TIA); age > 75 years; heart failure (NYHA Class II); diabetes mellitus; hypertension. **Dosage and administration:** The recommended daily dose of PRADAXA[®] is 300 mg twice daily. Therapy should be continued long term. For patients aged >85 years or patients who receive concomitant treatment, the recommended daily dose of PRADAXA[®] is 220 mg twice daily. For the patients aged between 75–85 years, patients with moderate renal impairment, patients with gastric, esophageal or gastrointestinal reflux or other patients at increased risk of bleeding, the daily dose of PRADAXA[®] is 300 mg or 220 mg and should be selected based on an individual assessment of the thrombotic risk and the risk of bleeding. Patients on stop or PRADAXA[®] who are being co-treated with the following strong P-gp inhibitors: cyclosporine, tacrolimus, sirolimus and the fixed dose combination (gabapentin/pregabalin). Pre-existing heart failure requiring anticoagulant treatment. Special warnings and precautions: PRADAXA[®] should be used with caution in conditions with an increased risk of bleeding or with concomitant use of medicinal products affecting haemostasis by inhibition of platelet aggregation. In clinical trials, PRADAXA[®] was associated with higher rates of major gastrointestinal (GI) bleeding. An increased risk was seen in the elderly (> 75 years) for the 150 mg twice daily dose regimen. The presence of lesions, conditions, procedures and/or pharmacological treatment (such as NSAIDs, antiplatelets, SSRIs and SNRIs), which significantly increase the risk of major bleeding requires a careful benefit-risk assessment. Close observation for signs of bleeding or anaemia is recommended throughout the treatment period, especially if risk factors are combined. Patients who develop acute renal failure must discontinue PRADAXA[®]. The use of fibrinolytic medicinal products for the treatment of acute ischaemic stroke may be considered if the patient presents with a DTT, ECT or aPTT not exceeding the upper limit of normal (ULN) according to the local reference range. Patients on PRADAXA[®] who undergo surgery or invasive procedures are at increased risk of bleeding and may therefore require temporary discontinuation of PRADAXA[®]. PRADAXA[®] treatment should be resumed if started after the invasive procedure or surgical intervention as soon as possible provided the clinical situation allows and adequate haemostasis has been established. No treatment experience is available for patients with elevated liver enzymes > 2 ULN, and therefore the use of PRADAXA[®] is not recommended in this population. Direct acting oral anticoagulants (DOACs) including PRADAXA[®] are not recommended for patients with a history of thrombosis who are diagnosed with anti-phospholipid syndrome. In particular for patients that are triple positive for lupus anticoagulant, anticardiolipin antibodies, and anti beta 2-glycoprotein I antibodies. **Interactions:** Dabigatran etexilate is a substrate for the efflux transporter P-gp. Concomitant administration of P-gp inhibitors is expected to result in increased dabigatran plasma concentrations. There is no or only limited experience with the following treatments which may increase the risk of bleeding when used concomitantly with PRADAXA[®]: anticoagulants such as unfractionated heparin (UFH), low molecular weight heparins (LMWH), and heparin derivatives (fondaparinux, desirudin), thrombolytic medicinal products, and vitamin K antagonists, rivaroxaban or other oral anticoagulants, and antiplatelet aggregation medicinal products such as GpIIb/IIIa receptor antagonists, ticlopidine, prasugrel, clopidogrel, dextran, and sulfapyrazole. **Adverse reactions:** Common: Anaemia, Ecchymosis, Gastrointestinal haemorrhage, Abdominal pain, Diarrhoea, Dyspepsia, Nausea, Skin haemorrhage, Gastrointestinal haemorrhage including haematuria, Urinary tract, Haemoglobin decreased, Thrombocytopenia, Drug hypersensitivity, Rash, Pruritus, Intracranial haemorrhage, Haematuria, Haemoptysis, Rectal haemorrhage, Haemorrhoidal haemorrhage, Gastrointestinal ulcer including esophageal ulcer, Gastroesophageal reflux disease, Vomiting/Dyspepsia, Hepatic function abnormal/Liver function test abnormal, Alanine aminotransferase increased, Aspartate aminotransferase increased, Rare: Haematocrit decreased, Apathetic reaction, Angioedema, Urticaria, Hepatic enzyme increased, Hyperbilirubinaemia, Haemorrhoids, Injection site haemorrhage, Catheter site haemorrhage, Traumatic haemorrhage, Injection site haemorrhage. **Storage conditions:** Store in the original package in order to protect from moisture. Store below 30°C. Do not remove capsules from blister pack until just before use. **Note:** Before prescribing, please consult full prescribing information.

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Abbreviated Prescribing Information PRAXBIND[®] (idarucizumab)

Presentations: Idarucizumab solution for injection/infusion, 500 mg/50 mL. **Indications:** Praxbind is a specific reversal agent for dabigatran and is indicated in adult patients treated with Pradaxa (dabigatran etexilate) when rapid reversal of its anticoagulant effects is required. For emergency surgery/procedures, life-threatening or uncontrolled bleeding. **Dosage and administration:** Restricted to hospital use only. The recommended dose of Praxbind is 5 g (2x 2.5 g/50 mL) administered intravenously as two consecutive infusions over 5 to 10 minutes each as a bolus injection. No dose adjustments are required in elderly patients, patients with hepatic injury and in elderly patients aged 75 years and above. **Contraindications:** None. **Special warnings and precautions:** Idarucizumab binds specifically to dabigatran and reverses its pharmacological effect. It will not reverse the effects of other anticoagulants. Praxbind treatment can be used in conjunction with standard supportive measures, which should be considered as medically appropriate. If an anaphylactic reaction or other serious allergic reaction occurs, administration of Praxbind should be discontinued immediately and appropriate therapy initiated. The recommended dose of Praxbind contains 4 g sodium as an excipient. Therefore, in patients with hereditary fructose intolerance the use of Praxbind must be weighed against the potential benefit of such an emergency treatment. Patients being treated with dabigatran have underlying disease states that predispose them to thrombotic events. Reversing dabigatran therapy exposes patients to the thrombotic risk of their underlying disease. To reduce this risk, resumption of anticoagulant therapy should be considered as soon as medically appropriate. Praxbind causes transient anaemia, which is not indicative of vessel damage. This medicinal product contains 50 mg sodium per dose, equivalent to 2.5% of the WHO recommended maximum daily intake of 2 g sodium for an adult. **Interactions:** No formal interaction studies with Praxbind and other medicinal products have been performed. Based on the pharmacokinetic properties and the high specificity in binding to dabigatran, clinically relevant interactions with other medicinal products are considered unlikely. **Adverse reactions:** No adverse reactions have been identified. **Storage conditions:** Store in a refrigerator (2°C–8°C). Do not freeze. **Note:** Before prescribing, please consult full prescribing information.

Treatment of Cerebral Venous Sinus Thrombosis

LIAO Ting



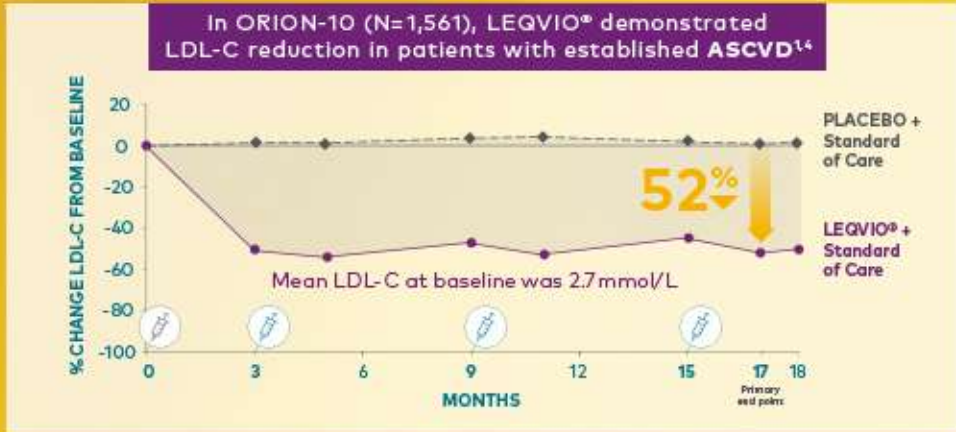
專業資格：

澳門鏡湖醫院神經外科副主任顧問醫生
澳門醫學專科學院外科分科學院神經外科學部院士

社會職務：

澳門醫學專科學院學籍委員會委員
澳門醫學專科學院外科分科學院院務委員會委員
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澳門外科學會理事長
澳門神經醫學會副會長
澳門臨床放射學會副會長
澳門腫瘤醫學會理事

2 DOSES A YEAR* FOR EFFECTIVE AND SUSTAINED LDL-C REDUCTION^{1†}



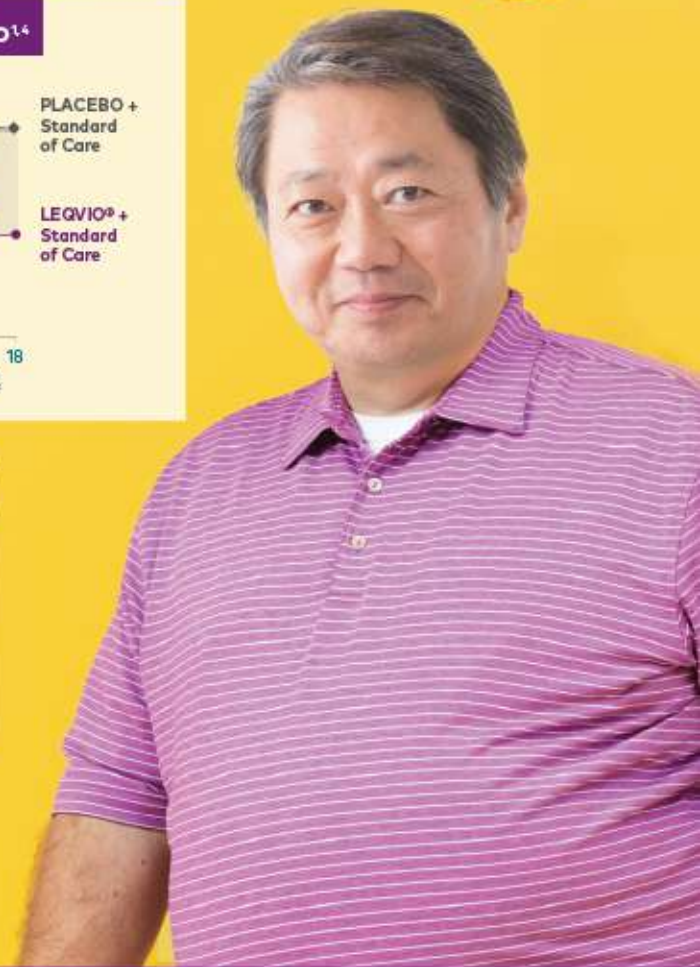
Patients in both study arms were on a maximally tolerated statin.^{1,4}

In ORION-10 clinical trial, LEQVIO[®] demonstrated LDL-C reduction in ASCVD patients:⁴

**52%
EFFECTIVE
LDL-C
REDUCTION**

Between-group difference of -52.3% (95% CI: -55.7%, -48.8%; P<0.001) refers to the difference between the placebo group (1.0%) and the LEQVIO[®] group (-51.3%) at month 17.

*LEQVIO[®] is dosed initially, again at 3 months, and then once every 6 months.¹
[†]LDL-C reduction was maintained during each 6-month dosing interval.¹



Study design: ORION-10 was a multicenter, double-blind, randomized, placebo-controlled 18-month clinical trial. Patients with established ASCVD were taking a maximally tolerated dose of statin with or without other lipid-modifying therapy and required additional LDL-C reduction. The ORION-11 trial, in addition to patients with ASCVD, included adults who were ASCVD risk equivalent (type 2 diabetes, familial hypercholesterolemia, or a 10-year risk of a cardiovascular event of >20% as assessed by the Framingham Risk Score for Cardiovascular Disease or equivalent).

Abbreviations: ASCVD, atherosclerotic cardiovascular disease; CI, confidence interval; LDL-C, low-density lipoprotein cholesterol.

References: 1. Leqvio. Hong Kong Prescribing Information. Novartis Pharmaceuticals. 2021. 2. U.S. Food & Drug Administration. FDA approves add-on therapy to lower cholesterol among certain high-risk adults. <https://www.fda.gov/drugs/news-events-human-drugs/fda-approves-add-therapy-lower-cholesterol-among-certain-high-risk-adults>. Published Dec 2021. Accessed on 12 Apr 2022. 3. European Medicine Agency. <https://www.ema.europa.eu/en/medicines/human/EPAR/leqvio>. Accessed on 22 Mar 2022. 4. Ray KK, Wright RS, Kallend D, et al. ORION-10 and ORION-11 Investigators. Two phase 3 trials of inclisiran in patients with elevated LDL cholesterol. *N Engl J Med*. 2020;382(16):1307-1319.

Leqvio[®] Important note: Before prescribing, consult full prescribing information. **Presentation:** Solution for injection: Each pre-filled syringe contains 1.5 mL of solution containing 284 mg inclisiran (equivalent to 300 mg inclisiran sodium). **Indications:** Leqvio is indicated in adults with primary hypercholesterolemia (heterozygous familial and nonfamilial) or mixed dyslipidemia, as an adjunct to diet; • in combination with a statin or statin with other lipid lowering therapies in patients unable to reach LDL-C goals with the maximum tolerated dose of a statin, or • alone or in combination with other lipid lowering therapies in patients who are statin intolerant, or for whom a statin is contraindicated. **Dosage and administration:** Recommended dose: 284 mg inclisiran administered as a single subcutaneous injection: Initially, again at 3 months, followed by every 6 months. **Missed dose:** • If a planned dose is missed by less than 3 months, inclisiran should be administered and dosing continued according to the patient's original schedule. • If a planned dose is missed by more than 3 months, a new dosing schedule should be started – inclisiran should be administered initially, again at 3 months, followed by every 6 months. **Treatment Transitions from PCSK9 Inhibitor/Monoclonal Antibody:** Inclisiran can be administered immediately after the last dose of a monoclonal antibody PCSK9 inhibitor. To maintain LDL-C lowering it is recommended that inclisiran is administered within 2 weeks after the last dose of a monoclonal antibody PCSK9 inhibitor. **Special populations:** Renal impairment: No dose adjustments are necessary for patients with mild, moderate or severe renal impairment or patients with end stage renal disease. There is limited experience with inclisiran in patients with severe renal impairment. Inclisiran should be used with caution in these patients. **Hepatic impairment:** No dose adjustments are necessary for patients with mild (Child Pugh class A) or moderate (Child Pugh class B) hepatic impairment. No data are available in patients with severe hepatic impairment (Child Pugh class C). Inclisiran should be used with caution in patients with severe hepatic impairment. **Pediatric patients (below 18 years):** The safety and efficacy of inclisiran have not been established. **Geriatric patients (65 years of age or above):** No dose adjustment is necessary. **Method of administration:** Intended for administration by a healthcare professional. For subcutaneous injection into the abdomen, alternative injection sites include the upper arm or thigh. Injections should not be given into areas of active skin disease or injury such as sunburns, skin rashes, inflammation or skin infections. Leqvio should be inspected visually for particulate matter prior to administration. Each pre-filled syringe is for single use only. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients. **Warnings and precautions:** **Reproductive:** Considering that inclisiran is eliminated renally, its elimination should not be performed for at least 72 hours after inclisiran dosing. **Pregnancy:** Inclisiran, lactation, females and males of reproductive potential. **Pharmacology:** There are no or limited amount of data from the use of inclisiran in pregnant women. A animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity. As a precautionary measure, it is preferable to avoid the use of inclisiran during pregnancy. **Lactation:** It is unknown whether inclisiran is excreted in human milk. Available pharmacodynamic/toxicological data in animals have shown excretion of inclisiran in milk. A risk to newborns/infants cannot be excluded. A decision must be made whether to discontinue breast feeding or to discontinue/abstain from inclisiran therapy, taking into account the benefit of breast feeding for the child and the benefit of therapy for the woman. **Inferfertility:** No human data. No effects on animal fertility. **Adverse drug reactions:** Common (≥1 to <10%): Adverse events at the injection site (includes injection site reaction, injection site pain, injection site erythema, and injection site rash). **Interactions:** Not a substrate, inhibitor or inducer of CYP450 enzymes or common drug transporters. Not expected to have clinically significant interactions with other medications. Drug-drug interaction assessments demonstrated a lack of clinically meaningful interactions with other atorvastatin, rosuvastatin or other statins. **Packs:** Solution in pre-filled syringe. 13. **Legal classification:** P1S153 Last revision: Sep 2021 Ref: EU Dec 2020

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Sustained LDL-C Control with siRNA

WONG Yiu Tung, Anthony

Consultant Cardiologist, Hong Kong Sanatorium Hospital
Honorary Clinical Assistant Professor,
Department of Medicine (HKU)
Specialist in Cardiology
MBBS (HK), MRCP (UK), FRCP (Glasg), FHKCP, FHKAM (Medicine)

BIOGRAPHY

Dr. Wong Yiu Tung, Anthony graduated at the medical school of the University of Hong Kong in 2006. He received his training in medicine and cardiology at the Queen Mary Hospital. He further completed a one-year training program in coronary and structural heart intervention at the Asan Medical Center, Seoul, South Korea. He is now an experienced specialist in cardiology practising in the Hong Kong Sanatorium & Hospital. He is also a part-time consultant cardiologist at the Queen Mary Hospital. He is specialized in percutaneous coronary intervention, structural heart intervention (TAVR, LAAO, MitraClip), renal denervation and cardiac device implantation. He is also the organizing committee member of the annually held HK Valve Conference. He was a past Cardiology Board Member of Hong Kong College of Physician.

ABSTRACT

According to the 2018 ACC/AHA recommendations for secondary prevention of atherosclerotic cardiovascular disease, patients not at very high-risk and age <75 should aim for an LDL-C reduction of 50% or above or reach 1.8mmol/L; while patients at very-high risk should reach the target goal of 1.8mmol/L. In 2019, the ESC/EAS guideline further recommends high-risk patients to reach LDL-C goal of 1.4mmol/L and at least a 50% LDL-C reduction. Recently, the Chinese College of Cardiovascular Physician and Chinese Medical Doctor Association recommended similar guidance for patients with Acute Coronary Syndrome, reflecting the increasing healthcare burden having recurrent coronary events in these patient groups.

There has been a long history indicating the correlation between LDL-C and Coronary Heart Disease and both magnitude and duration of LDL-C exposure impact risk for the patient. Knowing this, effective and convenient options of LDL-C is needed to enhance patient adherence, while helping patient reach to target LDL-C goal.

Small interfering RNA (inclisiran) targets the mRNA in the hepatocyte allowing greater hepatic uptake of circulating LDL-C thus reducing LDL-C levels in the bloodstream. Multiple clinical trials have shown in different patient groups, inclisiran has been shown effective reduction in LDL-C levels of >50%. Its convenient 6-month dosing does not require refrigeration and can be adapted to clinic follow-up schedule. While we await for long-term outcome results to be presented, the consistent LDL-C reduction can provide patients with a stable LDL-C level, minimizing risk of prolonged exposure to high LDL-C in the bloodstream.

ELIQUIS™

THE SAFER CHOICE^{1,2^}

Choose both **efficacy** and **safety** with ELIQUIS™

- Delivered both superior risk reduction in stroke/SE and major bleeding over warfarin in NVAF^{1,2^}
- Continued efficacy, with favorable bleeding profile regardless of bleeding endpoint, for the treatment of DVT/PE^{3†}

* There are no head-to-head trials comparing NOACs

† ELIQUIS™ provided significant risk reduction across all types of bleeding vs enoxaparin/warfarin in patients treated for DVT/PE†
DVT deep vein thrombosis; NOAC, non-vitamin K antagonist oral anticoagulant; NVAE nonvalvular atrial fibrillation; PE, pulmonary embolism; SE, systemic embolism; VKA, vitamin K antagonist; VTE, venous thromboembolism

References: 1. Granger CB, et al. *N Engl J Med* 2011;365:981-992. 2. Ruff CT, et al. *Lancet* 2014;383:955-962. 3. Agnelli G, et al. *N Engl J Med* 2013;369:799-808.

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PP-EU-MAC-0012 SEP 2023

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Apixaban (2.5 mg)



<https://www.pfi.sr/3Dg>

Apixaban (5 mg)



<https://www.pfi.sr/3DM>

The QR code† URL links to the latest version of Prescribing Information updated to Instituto para a Supervisão e Administração Farmacêutica (ISAF) in Macau.

Interpreting the Latest Guidelines in ACS

FUNG Chi Yin, Raymond



BIOGRAPHY

Dr. Raymond Chi-yan Fung is an Interventional Cardiologist. He obtained his medical degree from the University of Sydney in 1997. He completed his postgraduate training in Internal Medicine and Cardiology at the Department of Medicine and Geriatrics, United Christian Hospital in 2007. He then pursued study at the Chinese University of Hong Kong leading to the award of a Master Degree in Epidemiology and Biostatistics in 2013. He obtained Hong Kong Heart Foundation Scholarship in the same year and underwent one year overseas fellowship training in the field of Interventional Cardiology at the Royal Alexandra Hospital, University of Alberta, Edmonton, Canada.

He is currently the Chief of Cardiology Unit / Cardiac Catheterization Laboratory Director at Princess Margaret Hospital specializing in Chronic Total Occlusion and Structural Heart Intervention.

Area of interest:

Complex Coronary Intervention and Structural Heart Intervention.

ABSTRACT

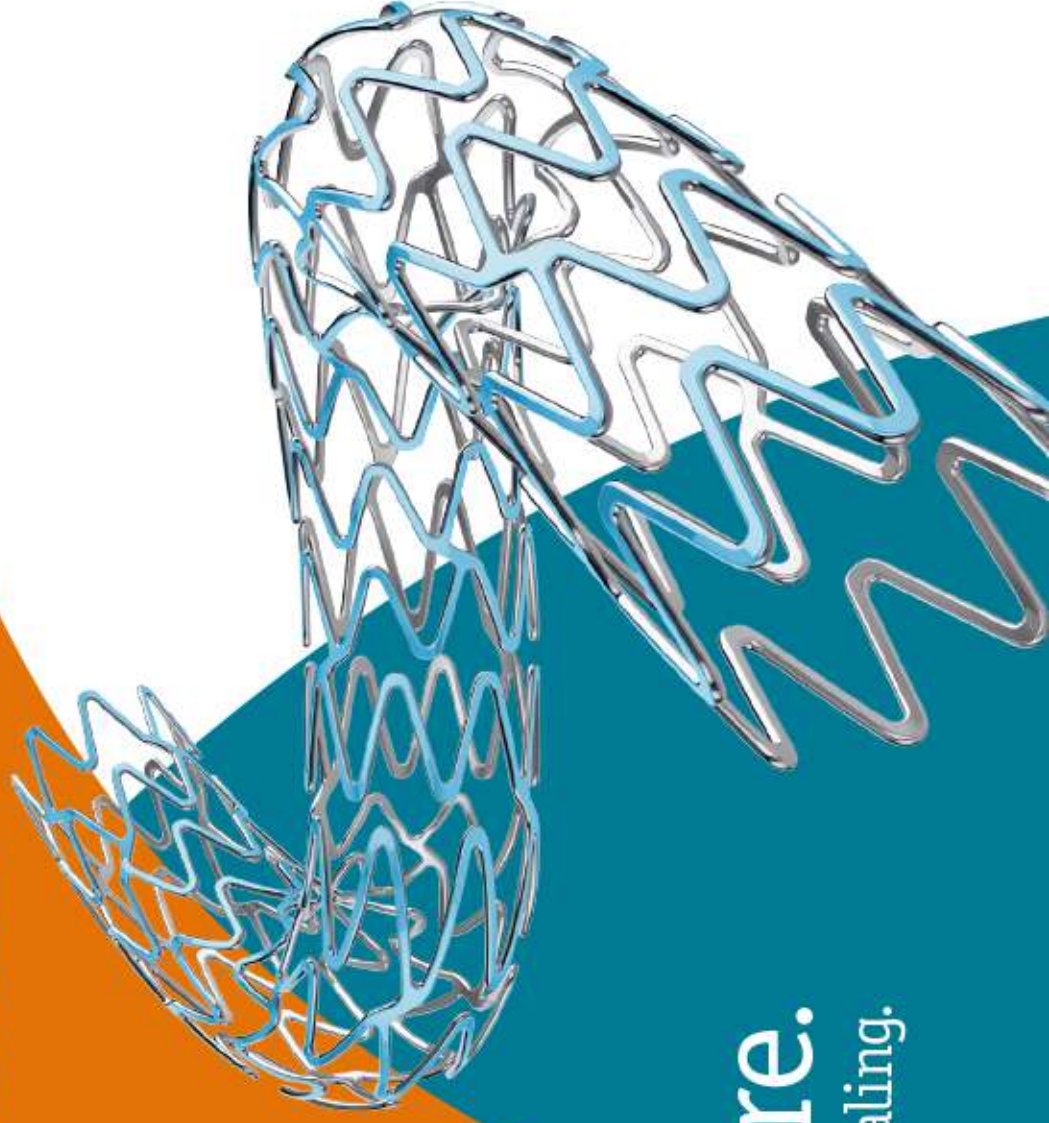
This lecture offers a comprehensive understanding of the most recent guidelines in antiplatelet treatment for Acute Coronary Syndrome (ACS). Dr. Raymond Fung Chi Yan will share key updates and changes in antiplatelet strategies, supported by evidence from clinical trials. The topics covered will include the selection of antiplatelet agents, treatment duration, and considerations for specific patient populations. By the end of the lecture, participants will have the knowledge to make informed decisions regarding the selection and management of antiplatelet therapies, ultimately leading to improved patient outcomes.

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Optimising HF Management: Is it Time to Treat HF regardless of Ejection Fraction?

TSE Hung Fat



Prof. Tse Hung-Fat, MBBS, MD, PhD, FACC, FRCP, FESC BIOGRAPHY

Prof. Hung-Fat Tse is Chair Professor of Cardiovascular Medicine, and William MW Mong Professor in Cardiology; Chairpersons and Chief of Service of the Department of Medicine; Chief in the Cardiology Division, Department of Medicine, Queen Mary Hospital; Co-director, Cardiac & Vascular Center, The University of Hong Kong - Shenzhen Hospital. He is also the academic lead, HKUMed Laboratory of Cellular.

Therapeutics, The University of Hong Kong. He is a clinician scientist and an international expert in cardiovascular medicine, including cardiac pacing, clinical electrophysiology, and cardiovascular regeneration. Prof. Tse is one of the pioneers for novel therapies, including stem cell and devices for treatment of cardiovascular diseases. He has established the large animal laboratory for cardiovascular research as well the “Good Manufacturing Practice” laboratory for human stem cells and biological therapies in the University of Hong Kong. He has been awarded multiple major local grants (including the Theme Based Research Grant, Research Impact Fund and Innohealth) as well as national research grants (National Natural Science Foundation of China and 973 grants) for his researches. He has been participated into many international and regional clinical trials and studies, and is currently the Associate Editors for several international journals, including Cardiovascular Diabetology, Frontier in Cardiovascular Medicine, Journal of Cardiovascular Electrophysiology, Pacing and Clinical Electrophysiology and Journal of Arrhythmia. He has published over 730 scientific publications in international top-ranking scientific journals, including New England Journal of Medicine, Lancet, Nature Medicine, Nature Cell Biology, Nature Genetic, Nature Protocol, Nature Communication, Nature Biomedical Engineering, Nature Disease Primer, Cell Stem Cell, Circulation, Journal of American College of Cardiology, and European Heart Journal.

ABSTRACT

Heart failure is a progressive and devastating illness that affects 60 million individuals worldwide, and its prevalence is expected to rise due to the aging population. The treatment of heart failure currently faces a significant unmet need, as approximately half of those diagnosed with the condition are projected to pass away within five years.

Sodium-glucose cotransporter 2 (SGLT2) inhibitors, such as empagliflozin, have been shown to significantly decrease the risk of cardiovascular death or hospitalization for heart failure in patients with chronic heart failure, both with a reduced left ventricular ejection fraction (LVEF) and a preserved LVEF.

Furthermore, the EMPULSE study demonstrated that empagliflozin can be initiated in the hospital setting for patients with acute heart failure following stabilization. This study provided evidence of clinical benefits for both acute new-onset heart failure and worsening chronic heart failure, regardless of ejection fraction or the presence of diabetes.

This lecture will cover the most recent clinical evidence regarding the use of SGLT2 inhibitors in this context and provide practical guidance for their implementation.

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1. Frigozzo G et al. - Eur Heart J. 2006; 27:942-948. 2. SinHC-VASTAREL 35 mg, modified-release film-coated tablet. 3. Glezer M, CHOICE-2 study investigators. Adv Ther. 2018;35:1103-1113.

COMPOSITION: Vastarel 35mg, modified-release film-coated tablet containing 35mg trimezidine. **INDICATIONS:** Indicated in adults as add-on therapy for the symptomatic treatment of patients with stable angina pectoris who are inadequately controlled by or intolerant to first-line antianginal therapies. **DOSEAGE and ADMINISTRATION:** The dose is one tablet of 35mg of trimezidine twice daily during meals. Benefit of the treatment should be assessed after three months and if necessary should be discontinued if there is no treatment response. Patients with renal impairment/elderly: In patients with moderate renal impairment (creatinine clearance [30-60] ml/min), 1 tablet of 35mg in the morning during breakfast. **CONTRAINDICATIONS:** Hypersensitivity to the active substance or to any of the excipients. **Precautions for use:** Patients with renal impairment, tremors, restless leg syndrome, and other related movement disorders. Severe renal impairment (creatinine clearance < 30ml/min). **WARNINGS:** This medicine is not a curative treatment for angina attacks, nor is it indicated as an initial treatment for unstable angina or myocardial infarction, nor in the pre-hospital phase or during the first days of hospitalization. In the event of an angina attack, the coronary artery should be revascularized and an adaptation of the treatment considered. Trimezidine can cause or worsen parkinsonian symptoms (tremor, akinesia, hypotonia), which should be regularly investigated, especially in elderly patients. Falls may occur, related to gait instability or hypotension, in particular in patients taking antihypertensive treatment. **INTERACTIONS:** Headache, abdominal pain, diarrhoea, dyspepsia, nausea, vomiting, rash, pruritus, urticaria, asthma. Rare: palpitations, tachycardia, arterial hypotension, orthostatic hypotension, that may be associated with malaise, dizziness or fall, in particular in patients taking antihypertensive treatment. **FERTILITY:** Not known. **USE MACHINES, DRIVING and OPERATING MACHINERY:** Caution because cases of dizziness and drowsiness have been observed. **UNDESIRABLE EFFECTS:** Common: dizziness, headache, abdominal pain, diarrhoea, dyspepsia, nausea, vomiting, rash, pruritus, urticaria, asthma. Rare: palpitations, tachycardia, arterial hypotension, orthostatic hypotension that may be associated with malaise, dizziness or fall, in particular in patients taking antihypertensive treatment. **ADVERSE REACTIONS:** Tremor, akinesia, hypotonia, gait instability, restless leg syndrome, other related movement disorders, usually reversible after treatment discontinuation, sleep disorders (insomnia, drowsiness), vertigo, constipation, exanthematous pustules, angioedema, agnathocytosis, thrombocytopenia, thrombocytopenic purpura, hepatitis. **OVERDOSE:** Trimezidine acts as a metabolic agent, preserving the myocardial high-energy phosphate intracellular levels. Anti-ischemic effects are achieved without concomitant haemodynamic effects. **PRESENTATION:** Pack of 60 modified-release film-coated tablets of Vastarel 35mg. **SERVIER HONG KONG LIMITED, 31/F, Tower 5, The Gateway, 15 Canton Road, Harbour City, Tsim Sha Tsui, Kowloon, Hong Kong. www.servier.hk. *For complete information, please refer to the complete Summary of Product Characteristics.**



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What We Learn from a Decade of NOAC Usage

Bonaventure IP

BIOGRAPHY

Dr. Bonaventure Ip obtained his Bachelor of Medicine and Bachelor of Surgery (MBChB) from The Chinese University of Hong Kong. He is a stroke interventionist serving as a clinical assistant professor at the Faculty of Medicine, CUHK. Dr. Ip's expertise covers anticoagulation, stroke-related big data analytics, advanced neuroimaging and endovascular intervention. Dedicated to research, Dr. Ip had authored multiple peer-reviewed publications in Science Robotics, JAMA Network Open, Neurology, Stroke and International Journal of Stroke. He received the Best Free Paper Award

Meeting (2021, 2019) and has been elected as an exemplary teacher and best teacher multiple times by the Faculty.

ABSTRACT

Over a decade has transpired since the groundbreaking trial of the initial direct oral anticoagulant (DOAC). The efficacy of DOAC as a preventive measure against nonvalvular atrial fibrillation-induced stroke is well-established. However, the usage of DOAC has given rise to new and common clinical scenarios, prompting clinicians to seek answers to pertinent questions. These questions include: (i) which DOAC is most suitable for my patients? (ii) what course of action should be taken if a patient experiences an ischemic stroke while on DOAC therapy? (iii) how should a patient be managed if they suffer a hemorrhagic stroke while on DOAC therapy? In this lecture, we aim to address these frequently asked questions by presenting a comprehensive analysis of randomized trials, observational studies, and animal data. By doing so, we hope to provide valuable insights and guidance to healthcare practitioners grappling with these clinical challenges.

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- **Concor[®]: Reduce 34% in CHF patients¹**
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ARRIVAL
METABOLIC

CAD: coronary artery disease, CHF: chronic heart failure, HTN: hypertension, GI: Gastrointestinal

References: 1. CIBIS-III Investigators and Committees (1999) *The Lancet*; 353:9-13; 2. UK Prospective Diabetes Study (UKPDS) Group (1998) *Lancet* 352(9131):854-65; 3. Concor HK Prescribing Information, Approved Jul 2016; 4. Glucophage XR Prescribing Information Version: Jun 2018; 5. Dorow P, et al. (1986) *Eur J Clin Pharmacol*, 31, 143-147; 6. Chatterjee SG (1986) *J Cardiovasc Pharmacol* 8(11):74-77; 7. Asmar RG, Kerhuel JC, Girend XJ et al. (1991), *Am J Cardiol*, 68 (1), 61-64; 8. Fogari R, et al. (1990) *J Cardiovasc Pharmacol*, 16 Suppl 5, S76-80; 9. Janku HU, et al. (1986) *J Cardiovasc Pharmacol*, 8 Suppl 11, S96-99; 10. Broekman CP, et al. (1992), *J Sex Marital Ther*, 18(4), 325-331; 11. Timmins P. (2005) *Clin Pharmacokinetics* 44:721-9; 12. Blonde et al. (2004) *Curr Med Res Opin* 20:565-72.

Products: Concor 2.5mg, Concor 5mg film-coated tablets for oral use containing 2.5mg & 5mg bisoprolol fumarate, respectively. Indications: Treatment of hypertension, coronary heart disease (angina pectoris), stable chronic heart failure (CHF) with reduced left ventricular systolic function in addition to ACE inhibitors, and diuretics, and optionally cardiac glycosides. Posology: for hypertension or angina pectoris: the dosage is 5mg bisoprolol fumarate once daily which may be increased to 10mg once daily if necessary. Maximum recommended dose is 20mg once daily. Treatment of stable CHF requires a titration phase, starting with a low dose (1.25mg once daily) and with gradual up-titration (2.5 for 2nd week, 3.75 for 3rd week, 5.4th to 7th week, 7.5 for 8th to 11th week, 10mg for 12th week and beyond, once daily) according to tolerability. Maximum recommended dose for CHF is 10mg bisoprolol fumarate once daily. Special populations: In severe renal impairment (creatinine clearance <20ml/min) or severe liver function disorders a daily dose of 10mg bisoprolol fumarate should not be exceeded for treatment of hypertension or angina pectoris and dose titration in patients with these functional impairments for CHF should be made with particular caution. Use in children is not recommended. Treatment with bisoprolol must not be stopped abruptly, since this might lead to a transitory worsening of heart condition. If transient worsening of heart failure, hypotension or bradycardia occurs during or thereafter the titration phase, recommend to reconsider the dosage of concomitant medication, or temporarily lower the dose of bisoprolol, or discontinuation. Reintroduction and/or up-titration of bisoprolol should always be considered when patient becomes stable again. Contraindications: acute heart failure or during episodes of heart failure decompensation, cardiogenic shock, second or third degree AV block, sick sinus syndrome, sinoatrial block, symptomatic bradycardia or hypotension, severe bronchial asthma, severe forms of peripheral arterial occlusive disease or severe forms of Raynaud's syndrome, untreated pheochromocytoma, metabolic acidosis, hypersensitivity to bisoprolol or to any of the excipients. Warnings and precautions for use: Use with caution in: hypertension or angina pectoris and accompanying heart failure; bronchospasm (bronchial asthma, obstructive airways disease; diabetes mellitus; symptoms of hypoglycaemia can be masked; strict fasting; ongoing desensitization therapy, first degree AV block; Prinzmetal's angina; peripheral arterial occlusive disease; pheochromocytoma. Patients with psoriasis or with a history of psoriasis. Symptoms of thyrotoxicosis may be masked. In patients undergoing general anesthesia, the anesthetist must be aware of beta-blockade. If it is thought necessary to withdraw beta-blocker therapy before surgery, this should be gradually and completed about 48 hours before anesthesia. Treatment of stable chronic heart failure with bisoprolol has to be initiated with a special titration phase. Especially in patients with coronary heart disease, the cessation of therapy with bisoprolol must not be done abruptly unless clearly indicated. There is no therapeutic experience in Concor in patients with NYHA class II heart failure, insulin dependent type I diabetes mellitus, severely impaired kidney function, severely impaired hepatic function, restrictive cardiomyopathy, congenital heart disease, hemodynamically significant organic valvular disease. Age >80 years, myocardial infarction within 3 months. Ability to drive and use machines: may be impaired, particularly at start of treatment, upon change of medication, or in conjunction with alcohol. Interactions: Combinations not recommended: class I antiarrhythmic drugs (CHF), calcium antagonists of the dihydropyridine type, class II antiarrhythmic drugs (CHF), calcium antagonists of the verapamil and diltiazem type, centrally-acting antihypertensive drugs. Combinations to be used with caution: class I antiarrhythmic drugs (hypertension or angina pectoris), calcium antagonists of the dihydropyridine type, class II antiarrhythmic drugs, parasympatholytic drugs, topical beta-blockers (e.g. eye drops), insulin and oral antidiabetic drugs, anesthetic agents, digitalis glycosides, non-steroidal anti-inflammatory drugs (NSAIDs), sympathomimetic agents, antihypertensive agents and other drugs with blood pressure lowering potential. Combination to be considered: mifepristone, monoamine oxidase inhibitors. Pregnancy and lactation: During pregnancy Concor is only recommended following careful assessment of benefit-to-risk ratio by the doctor. Use of bisoprolol not recommended during breastfeeding. Adverse reactions: Very common: bradycardia (in CHF patients), Common: worsening of pre-existing heart failure (in CHF patients), dizziness, headache, gastrointestinal complaints such as nausea, vomiting, diarrhea, constipation, feeling of coldness or numbness in the extremities, hypotension, asthma (in CHF patients), fatigue. Uncommon: AV-conduction disturbances, bronchospasm in patients with bronchial asthma or a history of obstructive airway disease, muscle weakness, muscle cramps, depression, sleep disorders, asthenia, orthostatic hypotension, in patients with hypertension or angina pectoris: worsening of pre-existing heart failure, bradycardia. Rare: increased triglycerides, increased liver enzymes (ALT, ASAT), syncope, reduced tear flow, hearing disorder, allergic rhinitis, hypersensitivity reactions such as itching, flush, rash, hepatitis, erectile dysfunction, nightmares, hallucinations. Very rare: conjunctivitis, alopecia; beta-blockers may provoke or worsen psoriasis or include psoriasis-like rash. Most common signs of overdose: bradycardia, hypotension, bronchospasm, acute cardiac failure, hypoglycaemia. Validity Code: February 2019.

Glucophage[®] XR Contents: Metformin HCl Indications: Reduction in risk or delay onset of type 2 DM in adult, overweight patients with IGT and/or IFG, and/or increased HbA1C who are at high risk for developing overt type 2 DM and still progressing towards type 2 DM despite implement intensive lifestyle change for 3-6 months. Treatment of type 2 DM in adults as an adjunct to adequate diet & exercise. Monotherapy or in combination w/ other oral antidiabetic medicines or insulin. Dosage: Adult w/ normal renal function (GFR ≥90 ml/min) Reduction in the risk or delay of the onset of type 2 DM Initially one 500-mg tab once daily w/ evening meal. After 10-15 days, adjust dose based on blood glucose measurements. Max. 2,000 mg once daily. Monotherapy in type 2 DM & combination w/ other oral antidiabetic agents Usual starting dose: One 500-mg tab once daily, or one 1,000-mg tab once daily. After 10-15 days, adjust dose based on blood glucose measurements. Max. recommended dose for 750 mg tab is 1.5g daily. Combination with insulin Usual starting dose is one tablet XR 500 mg or XR 1 g once daily, while insulin dosage is adjusted on the basis of blood glucose measurements. For renal impairment patients A GFR should be assessed before initiation of treatment and at least annually thereafter. In patients at an increased risk of further progression of renal impairment and in the elderly, renal function should be assessed more frequently, e.g., every 3-6 months. Total max. daily dose of 2 g for GFR 60-89 ml/min, consider dose reduction for declining renal function. Total max. daily dose of 2 g for GFR 45-59 ml/min, review any increased risk of lactic acidosis before initiating metformin, whereas starting dose is at most half of max. dose. Total max. daily dose of 1 g for GFR 30-44 ml/min, review any increased risk of lactic acidosis before initiating metformin, whereas starting dose is at most half of max. dose. Pre- & Post-Prandial Advice: Swallow whole, do not chew/crush. Contraindications: Any type of acute metabolic acidosis (such as lactic acidosis, diabetic ketoacidosis), severe renal failure (GFR <30 ml/min), hepatic insufficiency, infectious diseases, following an IY urography or angiography, heart failure, recent MI, resp. failure, shock, persistent or severe diarrhoea, recurrent vomiting, alcoholism. Lactation. Special Precautions: Regular renal & blood sugar monitoring. Risk of lactic acidosis, most often occurs at acute worsening of renal function or cardiorespiratory illness or sepsis. Discontinue prior administration of iodinated contrast agents or surgery. May impair ability to drive or operate machinery in combination w/ other antidiabetic agents. Pregnancy, Elderly (for reduction of risk or delay of type 2 DM) Interactions: Iodinated contrast agents, corticosteroids, NSAIDs, ACE inhibitors, diuretics, sympathomimetics, alcohol, COX II inhibitors, angiotensin II receptor antagonists, OCT1 and OCT2 inhibitor/inducer Presentations: XR tab 500 mg x 60's, 750 mg x 30's, 1,000 mg x 60's. Date of version: JUN 2018

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HK-MUL/MC-00035 APR2023

Treatment of Cerebral Venous Sinus Thrombosis

LIAO Ting



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1. Data on File at Abbott - XIENCE Skypoint™ Stent vs. XIENCE Sierra™ Stent.

2. Zanchin, C. et al. *J Am Coll Cardiol Interv.* 2019;12(17):1665-1675. Serruys P, et al. *N Engl J Med.* 2010;363:136-146.

Shiomi H, et al. *J Am Coll Cardiol Interv.* 2019;12:637-647. Kufner S, et al. *Circulation.* 2019;139(3):325-333.

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Sustained LDL-C Control with siRNA

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BIOGRAPHY

Dr. Wong Yiu Tung, Anthony graduated at the medical school of the University of Hong Kong in 2006. He received his training in medicine and cardiology at the Queen Mary Hospital. He further completed a one-year training program in coronary and structural heart intervention at the Asan Medical Center, Seoul, South Korea. He is now an experienced specialist in cardiology practising in the Hong Kong Sanatorium & Hospital. He is also a part-time consultant cardiologist at the Queen Mary Hospital. He is specialized in percutaneous coronary intervention, structural heart intervention (TAVR, LAO, MitraClip),

member of the annually held HK Valve Conference. He was a past Cardiology Board Member of Hong Kong College of Physician.

ABSTRACT

According to the 2018 ACC/AHA recommendations for secondary prevention of atherosclerotic cardiovascular disease, patients not at very high-risk and age <75 should aim for an LDL-C reduction of 50% or above or reach 1.8mmol/L; while patients at very-high risk should reach the target goal of 1.8mmol/L. In 2019, the ESC/EAS guideline further recommends high-risk patients to reach LDL-C goal of 1.4mmol/L and at least a 50% LDL-C reduction. Recently, the Chinese College of Cardiovascular Physician and Chinese Medical Doctor Association recommended similar guidance for patients with Acute Coronary

in these patient groups.

There has been a long history indicating the correlation between LDL-C and Coronary Heart Disease and both magnitude and duration of LDL-C exposure impact risk for the patient. Knowing this, effective and convenient options of LDL-C is needed to enhance patient adherence, while helping patient reach to target LDL-C goal.

Small interfering RNA (inclisiran) targets the mRNA in the hepatocyte allowing greater hepatic uptake of circulating LDL-C thus reducing LDL-C levels in the bloodstream. Multiple clinical trials have shown in different patient groups, inclisiran has been shown effective reduction in LDL-C levels of >50%. Its convenient 6-month dosing does not require refrigeration and can be adapted to clinic follow-up schedule. While we await for long-term outcome results to be presented, the consistent LDL-C reduction can provide patients with a stable LDL-C level, minimizing risk of prolonged exposure to high LDL-C in the bloodstream.

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Reduction in CV events^{††}

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p<0.001

Reduction in CV death[†]

-21%

p=0.001

Reduction in MI[†]

-16%

p=0.005



2020 ESC Guideline recommendations for antithrombotic treatment in NSTEMI-ACS patients without atrial fibrillation undergoing PCI[‡]

Recommendations	Class	Level
A P2Y ₁₂ receptor inhibitor is recommended in addition to aspirin and maintained over 12 months unless there are contraindications or an excessive risk of bleeding. Options are:	I	A
BRILINTA [™] , irrespective of the planned treatment strategy (invasive or conservative) (180 mg LD, 90 mg b.i.d.) [†] .	I	B

In 2021 ESC guidelines on cardiovascular disease prevention, prasugrel or BRILINTA[™] is preferred as standard antithrombotic treatment after ACS for 12 months as DAPT[‡].

2016 ACC/AHA Guideline focused update on duration of dual antiplatelet therapy in patient with coronary artery disease[§]

Recommendations	Class	Level
In patients with ACS (NSTEMI-ACS or STEMI) treated with DAPT after coronary stent implantation and in patients with NSTEMI-ACS treated with medical therapy alone (without revascularization), it is reasonable to use BRILINTA [™] in preference to clopidogrel for maintenance P2Y ₁₂ inhibitor therapy.	IIa	B-R
In patients with ACS (NSTEMI-ACS or STEMI) treated with DAPT after BMS or DES implantation, P2Y ₁₂ inhibitor therapy (clopidogrel, prasugrel, or BRILINTA [™]) should be given for at least 12 months.	I	B-R
In patients with ACS who are managed with medical therapy alone (without revascularization or fibrinolytic therapy) and treated with DAPT, P2Y ₁₂ inhibitor therapy (clopidogrel or BRILINTA [™]) should be continued for at least 12 months.	I	B-R

* The PLATO study was a multicentre, randomized, double-blind trial. 18,824 patients admitted to the hospital with an ACS, with or without ST-segment elevation were randomized to receive either BRILINTA[™] (180 mg loading dose, 90 mg twice daily thereafter) or clopidogrel (300 to 600 mg loading dose, 75 mg daily thereafter) for the prevention of cardiovascular events for 12 months. All patients receive aspirin at a dose of 75 to 100 mg/day unless they could not tolerate the drug. The primary efficacy variable was the time to the first occurrence of composite of death from vascular causes, myocardial infarction, or stroke. The principal secondary efficacy endpoint was the primary efficacy variable studied in the subgroup of patients for whom invasive management was planned at randomization¹.

† CV events=CV death, MI, or stroke.

‡ Other options include prasugrel and clopidogrel.

ACC=American College of Cardiology; ACS=acute coronary syndrome; AHA=American Heart Association; BMS=bare metal stent; CAD=coronary artery disease; CV=cardiovascular; DAPT=dual antiplatelet therapy; DES=drug-eluting stent; ESC=European Association for Cardio-Thoracic Surgery; ESC=European Association for the Study of Diabetes; ESC=European Society of Cardiology; MI=myocardial infarction; NSTEMI-ACS=non-ST elevation acute coronary syndrome; PCI=percutaneous coronary intervention; STEMI=ST-segment elevation myocardial infarction.

References: 1. Wallentin L, et al. N Engl J Med. 2009;361:1045-1057. 2. Collet JP, et al. Eur Heart J. 2021;42:1288-1287. 3. Levine GN, et al. Journal of the American College of Cardiology. 2016;68(10):1082-1115. 4. Vassalli P, et al. European Heart Journal. 2021;42(34):3227-3237.

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ticagrelor tablets, 90mg film-coated tablet, indicated for antiplatelet use, used for prevention of thrombotic events in acute patients with ACS, or a history of myocardial infarction (MI) and a high risk of developing an atherothrombotic event. Dose: Should be taken with 15-30mg aspirin daily, once daily, orally. For ACS patients, should be taken with a single 180mg loading dose and then continued at 90mg twice daily for 12 months unless discontinuation is clinically indicated. For patients with a history of MI or ACS, use once daily and a high risk of an atherothrombotic event, when advised treatment is required, taking twice daily (once morning, once evening). Hypersensitivity to any ingredients or excipients; active pathological bleeding; history of intracranial haemorrhage; severe hepatic impairment. Contraindications with strong CYP3A4 inhibitors: c.c. ketoconazole, itraconazole, voriconazole, posaconazole, isavuconazole, and sitagliptin. Contraindications: Proxiprone and Isradipine. Children <18 years, Pregnancy and lactation. Patients with a previous stroke. Do not combine use of medicinal products that may increase the risk of bleeding within 24 hours of dosing or known to alter haemostasis: e.g. anti-thrombotic therapy under recombinant factor VIII; Gleevec for 7-day before surgery; Moderate hepatic impairment. Patients at risk for bleeding events; concomitant use of medicinal products known to increase bleeding; History of serious adverse events; Patients with severe renal impairment; concomitant treatment with an anti-viral; History of epistaxis/haemorrhoids or gastric ulcers; Use of acid-inhibitors; High serum creatinine level >300µmol/L. Promote treatment discontinuation; Do not combine with other CYP3A4 inhibitors: c.c. ritonavir, atazanavir, ceftriaxone and clarithromycin. Do not combine with CYP3A4 substrates with narrow therapeutic index: e.g. cyclosporin, tacrolimus, sirolimus and everolimus. Patients at high risk of bleeding: Patients on oral anticoagulants; concomitant use of intravenous or intrathecal -fibrinolytic medicinal products metabolized by CYP3A4; CYP3A4 substrates with narrow therapeutic index; Cyclosporin; Gleevec e.g. imatinib, sunitinib and dasatinib. Unintended effects: Bleeding (epistaxis, bruising, spontaneous haematuria, haemorrhagic diarrhoea, haemorrhagic dyspepsia, gingival or oral ulcers, oedema, syncope, headache, vertigo, hypotension, retinal haemorrhage, systemic bleeding (epistaxis, haemoptysis), gastrointestinal haemorrhage (gastrointestinal bleeding, rectal bleeding, gastric ulcer haemorrhage), cerebral, haemorrhage, myocardial infarction, subcutaneous or dermal bleeding (ecchymosis, skin haemorrhage, petechiae), rash, pruritus, urinary tract bleeding, pneumonia, cystitis, haematuria, nose bleed, cerebral haemorrhage, post-procedural haemorrhage, traumatic bleeding, periorbital haemorrhage, traumatic haematuria, traumatic haemorrhage, traumatic haemorrhage, fatal fatal postoperative haemorrhage in cardiac open surgery. APLAC 011/02/01/03/04/05/06/07/08/09/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000/1001/1002/1003/1004/1005/1006/1007/1008/1009/1010/1011/1012/1013/1014/1015/1016/1017/1018/1019/1020/1021/1022/1023/1024/1025/1026/1027/1028/1029/1030/1031/1032/1033/1034/1035/1036/1037/1038/1039/1040/1041/1042/1043/1044/1045/1046/1047/1048/1049/1050/1051/1052/1053/1054/1055/1056/1057/1058/1059/1060/1061/1062/1063/1064/1065/1066/1067/1068/1069/1070/1071/1072/1073/1074/1075/1076/1077/1078/1079/1080/1081/1082/1083/1084/1085/1086/1087/1088/1089/1090/1091/1092/1093/1094/1095/1096/1097/1098/1099/1100/1101/1102/1103/1104/1105/1106/1107/1108/1109/1110/1111/1112/1113/1114/1115/1116/1117/1118/1119/1120/1121/1122/1123/1124/1125/1126/1127/1128/1129/1130/1131/1132/1133/1134/1135/1136/1137/1138/1139/1140/1141/1142/1143/1144/1145/1146/1147/1148/1149/1150/1151/1152/1153/1154/1155/1156/1157/1158/1159/1160/1161/1162/1163/1164/1165/1166/1167/1168/1169/1170/1171/1172/1173/1174/1175/1176/1177/1178/1179/1180/1181/1182/1183/1184/1185/1186/1187/1188/1189/1190/1191/1192/1193/1194/1195/1196/1197/1198/1199/1200/1201/1202/1203/1204/1205/1206/1207/1208/1209/1210/1211/1212/1213/1214/1215/1216/1217/1218/1219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Interpreting the Latest Guidelines in ACS

FUNG Chi Yin, Raymond



BIOGRAPHY

Dr. Raymond Chi-yan Fung is an Interventional Cardiologist. He obtained his medical degree from the University of Sydney in 1997. He completed his postgraduate training in Internal Medicine and Cardiology at the Department of Medicine and Geriatrics, United Christian Hospital in 2007. He then pursued study at the Chinese University of Hong Kong leading to the award of a Master Degree in Epidemiology and Biostatistics in 2013. He obtained Hong Kong Heart Foundation Scholarship in the same year and underwent one year overseas fellowship training in the field of Interventional Cardiology at the Royal Alexandra Hospital, University of Alberta, Edmonton, Canada. He is currently the Chief of Cardiology Unit / Cardiac Catheterization Laboratory Director at Princess Margaret Hospital specializing in Chronic Total Occlusion and Structural Heart Intervention.

Area of interest:

Complex Coronary Intervention and Structural Heart Intervention.

ABSTRACT

This lecture offers a comprehensive understanding of the most recent guidelines in antiplatelet treatment for Acute Coronary Syndrome (ACS). Dr. Raymond Fung Chi Yan will share key updates and changes in antiplatelet strategies, supported by evidence from clinical trials. The topics covered will include the selection of antiplatelet agents, treatment duration, and considerations for specific patient populations. By the end of the lecture, participants will have the knowledge to make informed decisions regarding the selection and management of antiplatelet therapies, ultimately leading to improved patient outcomes.

Go lower and longer for better outcomes

Lowering LDL-C with Repatha® offers increased CV risk benefits over time¹

Reductions in the key secondary composite endpoint of CV death, MI or stroke in the FOURIER study*:

In the first year (0-12 months)

16%
RRR

HR: 0.84
95% CI: 0.74-0.93

Beyond the first year (12-36 months)

25%
RRR

HR: 0.75
95% CI: 0.64-0.85

Repatha® has demonstrated consistent safety over a 5-year treatment period²

Safety and tolerability outcomes in the 5-year OSLER-1 study:

Safety profile comparable to placebo



No neutralizing antibodies detected



Repatha® is supported by well-established worldwide clinical experience^{3,4}

Since launch, >1,000,000 patients have benefited from the sustained efficacy and consistent safety of Repatha®,³ including >41,000 patients in clinical trials⁴



*The composite of CV death, MI or stroke was a key secondary endpoint of the study; data presented are from prespecified exploratory analyses.¹

FOURIER study design: The FOURIER study was a double-blind, randomized, placebo-controlled, event-driven trial in 27,564 adult subjects with established CVD and with LDL-C 1.8 mmol/L and/or non-HDL-C 2.6 mmol/L despite high- or moderate-intensity statin therapy. Subjects were randomly assigned to receive Repatha® (140 mg every 2 weeks or 420 mg once monthly) or placebo. The median follow-up duration was 26 months.¹ The risk of the primary efficacy endpoint (a composite endpoint of time to CV death, MI, hospitalization for unstable angina, stroke, or coronary revascularization) was reduced by 15% (HR: 0.85; 95% CI: 0.79-0.92; p<0.001).¹

OSLER-1 study design: OSLER-1 was an open-label, 4-year extension study following a 1-year randomized treatment period.² 1,125 subjects enrolled in one of the phase 2 studies of Repatha® were randomized to SOC or SOC plus Repatha® 420 mg monthly during the randomized period; 1,151 patients progressed to the all-Repatha® period (420 mg monthly, plus SOC) for year 2 and beyond.² The primary objective was characterization of the long-term safety and tolerability of Repatha®; subjects were followed for up to 5 years.²

Abbreviations

CI, confidence interval; CV, cardiovascular; CVD, cardiovascular disease; HDL-C, high density lipoprotein cholesterol; HR, hazard ratio; LDL-C, low density lipoprotein cholesterol; MI, myocardial infarction; RRR, relative risk reduction; SOC, standard of care.

Repatha® (Evolocumab) Abbreviated Prescribing Information

Presentation: Evolocumab, pre-filled autoinjector 140 mg/mL. **Indications:** Primary hypercholesterolemia (heterozygous familial and non-familial) or mixed dyslipidaemia. As an adjunct to diet. In combination with a statin or statin with other lipid-lowering therapies in adult patients unable to reach LDL-C goals with the maximum tolerated dose of a statin or, alone or in combination with other lipid-lowering therapies in adult patients who are statin-intolerant or for whom statin is contraindicated. Homozygous familial hypercholesterolemia. In combination with other lipid-lowering therapies in adults and adolescents ≥12 years. Established atherosclerotic cardiovascular disease (myocardial infarction, stroke or peripheral arterial disease). In adult as an adjunct to correction of other risk factors. In combination with maximum tolerated dose of statin with or without other lipid-lowering therapies or, alone or in combination with other lipid-lowering therapies in patients who are statin-intolerant or for whom statin is contraindicated to reduce cardiovascular risk by lowering LDL-C levels. **Dosage:** Primary hypercholesterolemia or mixed dyslipidaemia: Recommended dose 140 mg every 2 weeks or 420 mg once monthly; both doses are clinically equivalent. Homozygous familial hypercholesterolemia: Initial recommended dose 420 mg once monthly. After 12 weeks, can be up titrated to 420 mg once every 2 weeks if clinically meaningful response is not achieved. Patients on apheresis may initiate treatment with 420 mg every 2 weeks to correspond with their schedule. Established atherosclerotic cardiovascular disease: Recommended dose 140 mg every two weeks or 420 mg once monthly; both doses are clinically equivalent. No dose adjustment is necessary in elderly patients (age ≥65 years), patients with renal impairment or with mild hepatic impairment. **Method of use:** S/c injection into the abdomen, thigh or upper arm region. Sites should be rotated and injections should not be given where skin is tender, bruised, red, or hard. Must not be administered IV or IM. The 420 mg dose should be administered consecutively using 3 pre-filled autoinjectors within 30 mins. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients. **Precautions:** Patients with moderate hepatic impairment: A reduction in total evolocumab exposure observed may lead to a reduced effect on LDL-C reduction; close monitoring may be warranted. Use with caution in patients with severe hepatic impairment. Needle cover of pre-filled autoinjector is made from dry natural rubber (a derivative of latex), which may cause severe allergic reactions. **Interactions:** ~20% increase in the clearance of evolocumab was observed in patients co-administered statins. No statin dose adjustments are necessary when used in combination with evolocumab. **Pregnancy:** Should not be used during pregnancy unless the clinical condition of the woman requires treatment with evolocumab. **Side effects:** Common: influenza, nasopharyngitis, upper respiratory tract infection, hypersensitivity, rash, nausea; back pain, arthralgia, injection site reactions such as bruising, erythema, haemorrhage, pain, swelling.

Please read the full prescribing information prior to administration and full prescribing information is available upon request. HNRPP004
REPATHA® is a registered trademark owned or licensed by Amgen Inc., its subsidiaries, or affiliates.

References: 1. Sabatine MS, et al. *N Engl J Med* 2017;376:1713-1722. 2. Koren MJ, et al. *J Am Coll Cardiol* 2019;74:2132-2146. 3. Amgen. Data on file. 4. Amgen. Amgen Announces Positive Results At ACC 20/ACC From Phase 3B Study of Repatha® (Evolocumab) In People Living With HIV Who Have High LDL-Cholesterol [press release]. Available at: <https://www.amgen.com/media/news-releases/2020/03/amgen-announces-positive-results-at-acc20-acc-main-phase-3b-study-of-repatha-evolocumab-in-people-living-with-hiv-who-have-high-ldl-cholesterol/>. Accessed 03 September 2020.

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Hemodynamic Monitoring of Macrocirculation, Microcirculation and Cellular Metabolism.

CHAN Wing Keung, David



BIOGRAPHY

Prof David CHAN is currently a Professor (Health Sciences) of St. Frances University. David received his Intensive Care training in United Kingdom in 1990s, and when he returned to Hong Kong, he became the nurse specialist (Intensive Care) of Prince of Wales Hospital. In 2008, he was deployed to the head office of Hospital Authority to help organizing & teaching the Guangdong specialty nurse training program. After that, he was invited to join the Hong Kong Polytechnic University in 2010 as a Senior Clinical Associate responsible for running & teaching Critical Care & Disaster Management in the Master of Nursing program. And now, he is a Professor (Health Sciences) of St. Frances University, responsible for teaching Intensive Care, Disaster Management, Clinical data (Lab data, x-ray & ECG) analysis & Medical Simulation subjects.

Other than his teaching work in College, he is also instructors/faculties of different specialties, including:

- (1) Intensive Care;
- (2) BLS & ACLS of American Heart Association (AHA);
- (3) Disaster and Trauma management courses (AHDR, AMLS, PHTLS) of the National Academy of Emergency Medical Technicians (NAEMT);
- (4) Tactical Emergency Medical Support (TEMS) of CIS & Training Qualifications of United Kingdom (TQUK);
- (5) Mental health first aid (The mental health association of Hong Kong);
- (6) Trainers of Medical Simulation (CSEC), Advanced mechanical ventilation (ASTiM), and trauma makeup (MMM) course for the HKJCILCM of the Academy of Medicine Hong Kong. He teaches these programs over different provinces in China, Hong Kong and Macau for the past 20 years. He is also the vice chair of many critical care associations in China, as well as honorary consultant & professor of different hospitals & universities in China.

Challenges to Nurses in Primary PCI

HO Kam Tak, Camille



BIOGRAPHY


Ms. Camille Ho started her nursing career in Queen Mary Hospital. After graduated as a registered nurse she gained her specialty training in Cardiac-thoracic and Intensive care Nursing in Hong Kong and Australia. Bachelor and Master of Science in Health Care (Nursing) at Hong Kong Polytechnic University.

Ms. Ho has extensive nursing experience, in Neonatal ICU, Cardiac & Thoracic ICU, Coronary care, Heart and Lung Transplantation coordination and Cardiac Rehabilitation.

In 2011 Ms. Ho was appointed as Senior Nursing Officer taking care of Cardiac Centre, Cardiac Peripheral Vascular Intervention Centre, ICU, Renal Dialysis Centre, Pediatric, Maternity and Nursery Departments, Staff Development Department of St Paul' s Hospital.

Ms. Ho has passion in nursing training and development and has been invited as guest speaker to share her knowledge in many international conferences.

Ms. Ho is the founding member of Hong Kong Cardiac Nursing Association and Hong Kong College of Cardiac Nursing. She also held a Dual Fellow Memberships, in Cardiac-Medical and Nursing and Health Care Management in Hong Kong Academy of Nursing.





Sharing on STEMI and AIS Management in Hong Kong, from pre-hospital to A&E

KWOK Shing Lam, Sirius



My current posts are:

- 1) Emergency Nurse in Hong Kong
 - 2) Advanced Practicing Nurse in Urgent Care Center of Hong Kong Adventist Hospital
 - 3) AHA Resuscitation Faculty
 - 4) St. John Ambulance Services Manager
 - 5) Honorary Tutor in Department of Emergency Medicine in HKU School of Clinical Medicine.
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Scientific Research Methods and Their Application in the Nursing Profession

LUK Hi Kwan, Bronya



Dr. LUK Hi Kwan Bronya 陸喜君博士
DHSc PolyU, MN SydU, BN SydU, Dip. Intensive Care Nursing HKU SPACE
RN(HK & Aus), AFHKCHSE, AFCHSM
Assistant Professor
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BIOGRAPHY

Dr. Bronya Luk is currently an Assistant Professor at the School of Nursing and Health Studies of Hong Kong Metropolitan University. Dr. Luk earned her bachelor's and master's degrees in nursing from The University of Sydney. She later pursued her doctoral study and was awarded Doctor of Health Science by The Hong Kong Polytechnic University in 2017. Prior to teaching at universities, Dr. Luk had practiced as a Registered Nurse in both Hong Kong and Australia. She has extensive clinical experience in intensive care nursing in public and private hospitals. She is a researcher, clin-

infertility care, critical care nursing, health promotion, and nursing education through innovation. She is currently a member of the Sigma Theta Tau International Honor Society of Nursing. She is also an Associate Fellow of the Australasian College of Health Service Management (AFCHSM) and the Hong Kong College of Health Service Executives (AFHKCHSE).





Nursing Management of Patients with IMPELLA

TAM Wai Keong

BIOGRAPHY

譚偉強，心臟科專科護士，2005年畢業於澳門鏡湖護理學院，曾在新加坡中央醫院進行交流學習，現任仁伯爵綜合醫院CCU及導管室護士，已有17年相關工作經驗。

ABSTRACT

IMPELLA是近年來最新的機械循環支持系統，也是世界上最小的暫時性人工心臟，為心臟提供血液動力的支援。IMPELLA系統經皮從股動脈微創植入到左心室，通過內置微型軸流泵建立左心室-升主動脈引流，可以把左心室內血液抽入，再從主動脈射出至全身器官，藉此達到輔助心臟泵血的作用。從而降低左心室舒張末期壓力及室壁張力，增加冠狀動脈及外周灌注，減輕右心室後負荷及肺毛細血管楔壓。同時亦因為經皮植入，創傷小，短時間應用於高危冠心病、急性心肌梗塞合併心源性休克的患者。

使用IMPELLA患者的護理則重於觀察設備內的參數、確保準確的位置、對警報進行故障排除及防止併發症發生。



Caring for Patients of Transcatheter Aortic Valve Replacement

WANG Yan



BIOGRAPHY

Dr. Wang Yan, associate professor, chairman of the Macau Nursing Education Association, has 20 years of experience in teaching and scientific research in universities, and won the "Excellent Teacher Award of Macau Polytechnic Institute".

Dr. Wang Yan focuses research on life and death education, nursing ethics, hospice simulation teaching, and evidence-based nursing. She has published more than 30 academic papers as the first author and participated in editing more than 10 textbooks and monographs.





Associação de Diagnóstico e de Terapêutica de Intervenção de Macau Annual Scientific Conference 2024

The Grand Ballroom, Level 1
February 25, 2024 (Sun)

FloorPlan

