

# 澳門介入診療學會 學術年會2023

Associação de Diagnóstico e de Terapêutica de Intervenção de Macau

ANNUAL SCIENTIFIC CONFERENCE 2023

2023/02/12

MGM MACAU GRAND BALLROOM



# 澳門介入診療學會 Welcoming Speech

All creations are reborn on New Year's Day. I wish you propitiation and prosperity in this new lunar year.

Over the last three years, the Macao government has aligned with residents to combat the COVID-19 outbreaks. At this moment, our daily life finally returns to normal. Therefore, it is an ideal time for our association (ASSOCIAÇÃO DE DIAGNÓSTICO E DE TERAPÊUTICA DE INTERVENÇÃO DE MACAU, ADTIM) to start organising a reunion to unify the strength of the medical specialists in Macao.

The purpose of establishing our association is to create a platform to communicate, exchange new diagnostic techniques, and update innovative treatments or strategies in different medical fields. Notably, the Macao medical community has already found various specialist associations that conduct medical academic activities effectively. However, our association has recruited elites from diverse specialties, for instance, internal medicine (including cardiology, gastroenterology, and neurology), radiology, neurosurgery, and general surgery. The association aims to open the intellectual door of each specialty and set up the clinical discipline and protocol in different specialties.

Though we are novices in initiating academic conferences, we strive for excellence in organising this activity. By contributing our effort to cultivating our medical specialists, the local medical specialists could be more competent and sophisticated. We expect that in the near future, specialists from different specialties will work jointly to improve the medical level and to provide a more qualified medical service. So, let's enrich our medical knowledge and grow up together.

In this critical moment of the rabbit new year, our association wish a happy new year, good luck, good health and good fortune to every attendant. I hope all participants enjoy our meeting today and, more importantly, acquire new knowledge from this academic activity.



LAM U Po  
President



# Organizing Committee

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Dr. LAM U Po  
Dr. JIN Chun  
Dr. Mario EVORA

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Dr. LEUNG Ki  
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Dr. NG Ka Kei  
Dr. TAM Man Pan  
Dr. TAM Weng Chio  
Dr. WONG U Kam

# Agenda

**SECTION 1** Chairperson: JIN Chun, KONG Soi Chau, TAM Man Pan

10:00-10:30 Wireless pacing device experience in CHCSJ

- LAM U Po (*Macau*)

10:30-11:00 熱消融治療肺部亞實性結節專家共識（2021年版）解讀

- 范衛君 (*Mainland China*)

11:00-11:30 Advancing the Management of Heart Failure with SGLT2i

- TSANG Chun Fung (*Hong Kong*)

11:30-12:00 Opening Ceremony

12:00-13:30 Lunch

**SECTION 2** Chairperson: NG Hou, CHONG Keng Sang, CHANG Tou

13:30-14:00 Management of Heart Failure Hospitalisation: Role of SGLT2 inhibitors and Practical Consideration - TSE Hung Fat (*Hong Kong*)

14:00-14:30 Perquisites for Extremely High Risk ACS PCI

- LAM Ho (*Hong Kong*)

14:30-15:00 Innovative Approach to Cholesterol Control

- YIU Kai Hang (*Hong Kong*)

15:00-15:30 Tea break

**SECTION 3** Chairperson: PON Monica, LEUNG Ki, KONG Kuan Kei

15:30-16:00 What is the best Angina Management

- TAM Weng Chio (*Macau*)

16:00-16:30 Are Statin enough? When to consider PCSK9 inhibitors

- WONG Chi Yuen (*Hong Kong*)

16:30-17:00 Treating patients with AF undergoing PCI: finding the sweet spot of treatment - LEONG Iat Lon (*Macau*)

17:00 Closing remarks

# Category

**SECTION 1** Chairperson: JIN Chun, KONG Soi Chau, TAM Man Pan

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10:30-11:00 范衛君 -----Page8

11:00-11:30 TSANG Chun Fung -----Page11

**SECTION 2** Chairperson: NG Hou, CHONG Keng Sang, CHANG Tou

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14:00-14:30 LAM Ho -----Page18

14:30-15:00 YIU Kai Hang -----Page21,22

**SECTION 3** Chairperson: PON Monica, LEUNG Ki, KONG Kuan Kei

15:30-16:00 TAM Weng Chio -----Page25,26

16:00-16:30 WONG Chi Yuen -----Page29

16:30-17:00 LEONG lat Lon -----Page32,33



Wireless pacing device  
experience in CHCSJ

## Dr.LAM U Po

U Po, Lam, MD, is a cardiovascular medicine specialist, consultant of Cardiology in Centro hospitalar de Conde S.Januario, Macao , graduated from Jinan University of Medicine Faculty on 1990, also got master degree in Medicine on 2004 in the same university . His cardiological specialist training follow associated with Peking Fu Wai Cardiovascular hospital on 1996,2005, pacing training with S Francisco Xavier hospital Lisbon on 1997, interventional course with Hong Kong Queen Elizabeth hospital on 2011,2014. His clinical interest is interventional cardiology, acute coronary syndrome and critical heart disease, otherwise, he facilitated in pacing and ICD implantation. Dr.Lam has lots social activities such as president of Macao physician society, vice president of Macao cardiology association, has authored and co-authored over ten publications in Chinese Medicine Journal, HKCC journal, etc.

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SETTING  
THE PACE  
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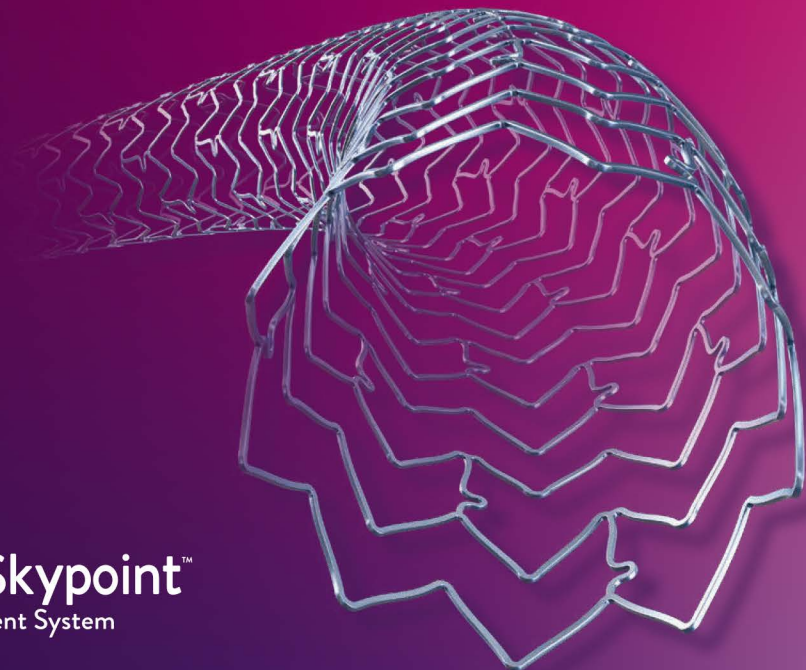


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1. Data on File at Abbott - XIENCE Skypoint™ Stent vs. XIENCE Sierra™ Stent. 2. Zanchin, C, et al. *J Am Coll Cardiol Interv. J Am Coll Cardiol Interv.* 2019;12(17):1665-1675. Serruys P, et al. *N Engl J Med.* 2010;363:136-146. Shiomi H, et al. *J Am Coll Cardiol Interv.* 2019;12:637-647. Kufner S, et al. *Circulation.* 2019;139(3):325-333.

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## 熱消融治療肺部亞實性 結節專家共識 2021年版 解讀

### 范衛君 主任醫師 博士研究生導師

中山大學附屬腫瘤醫院 微創介入治療科 - 主任

中國醫師協會腫瘤消融治療技術專家組 - 組長

中國抗癌協會腫瘤消融治療專業委員會 - 主任委員

中國臨床腫瘤學會（CSCO）腫瘤消融治療專家委員會 - 主任委員

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廣東省基層醫藥學會微創介入專業委員會 - 主任委員

《Journal of Cancer Research and Therapeutics》雜誌 副主編  
2019年第三屆“國之名醫·優秀風範”

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## Lowering LDL-C with Repatha® offers increased CV risk benefits over time<sup>1</sup>

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Since launch, >1,000,000 patients have benefited from the sustained efficacy and consistent safety of Repatha®,<sup>3</sup> including >41,000 patients in clinical trials<sup>4</sup>



\*The composite of CV death, MI or stroke was a key secondary endpoint of the study; data presented are from prespecified exploratory analysis.<sup>1</sup>

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. 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).<sup>1</sup>

OSLER-1 study design: OSLER-1 was an open-label, 4-year extension study following a 1-year randomized treatment period.<sup>2</sup> 1,125 subjects enrolled in one of five 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.<sup>2</sup> The primary objective was characterization of the long-term safety and tolerability of Repatha®; subjects were followed for up to 5 years.<sup>2</sup>

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® (Evolucumab) Abbreviated Prescribing Information

**Presentation:** Solution for injection; pre-filled autoinjector 140 mg/mL. **Indications:** Primary hypercholesterolaemia (heterozygous familial and non familial) or mixed dyslipidaemia; As an adjunct to diet. In combination with the maxim 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 hypercholesterolaemia; 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 maxim 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 hypercholesterolaemia or mixed dyslipidaemia: Recommended dose 140 mg every 2 weeks or 420 mg once monthly; both doses are clinically equivalent. Homozygous familial hypercholesterolaemia: 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 2 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:** SC 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 evolucumab exposure observed may lead to a reduced effect on LDL C reduction; close monitoring may be warranted. Used 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 evolucumab was observed in patients co-administered statins. No statin dose adjustments are necessary when used in combination with evolucumab. **Pregnancy:** Should not be used during pregnancy unless the clinical condition of the woman requires treatment with evolucumab. **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. HKREPPI04 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/WCC From Phase 3B Study Of Repatha® (Evolucumab) 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-acc20wcc-from-phase-3b-study-of-repatha-evolucumab-in-people-living-with-hiv-who-have-high-ldl-cholesterol/>. Accessed 03 September 2020.

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MO-00317-REP-2022-Sp  
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Improved outcomes matter

IN MI PATIENTS,  
THE SUPERIORITY<sup>1</sup>  
OF  
**BRILINTA<sup>TM</sup>**  
VS CLOPIDOGREL  
CAN MAKE THE  
DIFFERENCE

Reduction in CV events<sup>1†</sup>

-16%

p&lt;0.001

Reduction in CV death<sup>1</sup>

-21%

p=0.001

Reduction in MI<sup>1</sup>

-16%

p=0.005



2020 ESC Guideline recommendations for antithrombotic treatment in NSTEMI-ACS patients without atrial fibrillation undergoing PCI<sup>2</sup>

Recommendations	Class	Level
A P2Y <sub>12</sub> 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
<b>BRILINTA<sup>TM</sup></b> , irrespective of the planned treatment strategy (invasive or conservative) (180 mg LD, 90 mg b.i.d.) <sup>‡</sup> .	I	B

In 2021 ESC guidelines on cardiovascular disease prevention, prasugrel or **BRILINTA<sup>TM</sup>** is preferred as standard antithrombotic treatment after ACS for 12 months as DAPT<sup>4</sup>.

2016 ACC/AHA Guideline focused update on duration of dual antiplatelet therapy in patient with coronary artery disease<sup>3</sup>

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 <b>BRILINTA<sup>TM</sup></b> in preference to clopidogrel for maintenance P2Y <sub>12</sub> inhibitor therapy.	Ia	B-R
In patients with ACS (NSTEMI-ACS or STEMI) treated with DAPT after BMS or DES implantation, P2Y <sub>12</sub> inhibitor therapy (clopidogrel, prasugrel, or <b>BRILINTA<sup>TM</sup></b> ) 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 <sub>12</sub> inhibitor therapy (clopidogrel or <b>BRILINTA<sup>TM</sup></b> ) should be continued for at least 12 months.	I	B-R

<sup>1</sup> 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<sup>TM</sup>** (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 end point was the primary efficacy variable studied in the subgroup of patients for whom invasive management was planned at randomization<sup>1</sup>.

<sup>†</sup> CV events=CV death, MI, or stroke.

<sup>‡</sup> Other options include prasugrel and clopidogrel.

ACC=American College of Cardiology, ACS=acute coronary syndrome, BMS=bare metal stent, CAD=coronary artery disease, CV=cardiovascular, DAPT=dual antiplatelet therapy, DES=drug-eluting stent, EACS=European Association for Cardio-Thoracic Surgery, EASD=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;42:1289-1367. 3. Levine GM, et al. Journal of the American College of Cardiology. 2016;68(10):1082-1115. 4. Vasseren FLJ, et al. European Heart Journal. 2021;42(34):3227-3237.

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Presentation: Ticagrelor 90mg / 180mg film-coated tablet. Indication: Co-administered with aspirin, for prevention of atherothrombotic events in adult patients with ACS, or a history of myocardial infarction (MI) and a high risk of developing an atherothrombotic event. Dosage: Should be taken with 75-100mg aspirin daily, unless specifically contraindicated. For ACS patients, initiated 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 at least one year and a high risk of an atherothrombotic event, when extended treatment is required, 90mg twice daily recommended. Contraindications: Hypersensitivity to any ingredients of this product. Active pathological bleeding. History of intracranial haemorrhage. Severe hepatic impairment. Co-administration with strong CYP3A4 inhibitors e.g. itraconazole, clarithromycin, nefazodone, ritonavir, and atazanavir. Precautions and interactions: Children <18 years, pregnancy and lactation. Patients with a propensity to bleed. Concurrent use of medicinal products that may increase the risk of bleeding within 24 hours of dosing or known to alter haemostasis e.g. warfarin/other therapy and/or recombinant factor VIIa. Stop for 7 days before surgery. Moderate hepatic impairment; Patients at risk for bradycardic events. Concurrent use of medicinal products known to induce bradycardia. History of asthma and/or COPD. Patients >75 years. Moderate/severe renal impairment. Concurrent treatment with an ARI. History of hyperkalaemia or prerenal azotemia. Uric acid nephropathy. High aspirin maintenance dose (>100mg). Premature treatment discontinuation. Co-administration with potent CYP3A4 inducers e.g. rifampicin, phenytoin, carbamazepine and phenobarbital. Co-administration with CYP3A4 substrates with narrow therapeutic indices i.e. clozapine and ergot alkaloids. Patients on renal dialysis. Concurrent use of amilorast or ivabradine-olmesartan. Medicinal products metabolized by CYP3A4: CYP3A4 substrates with narrow therapeutic indices; Clozapine; SSRIs e.g. paroxetine, sertraline and citalopram. Undesirable effects: Blood disorder bleedings (bruise, spontaneous haematomas, haemorrhagic diarrhoea), hyperkalaemia, dyspnoea, gout/gouty arthritis, dizziness, syncope, headache, vertigo, hypotension, respiratory system bleedings (epistaxis, haemoptysis), gastrointestinal haemorrhage (gastrointestinal bleedings, rectal bleeding, gastric ulcer haemorrhage), diarrhea, nausea, dyspnoea, constipation, subconjunctival or dermal bleeding (ecchymosis, skin haemorrhage, petechiae), rash, pruritus, urinary tract bleedings (haematuria, cystitis haemorrhagic), blood creatinine increased, post-procedural haemorrhage, traumatic bleedings (contusion, traumatic haematomas, traumatic haemorrhage). Full local prescribing information is available upon request. API# HK\_BRIL90\_0818 BRIL90\_0516

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## Advancing the Management of Heart Failure with SGLT2i

### Dr. TSANG Chun Fung, Sunny

Dr Sunny Tsang obtained his medical degree from the Chinese University of Hong Kong in 2007. He worked in the Queen Elizabeth Hospital as an Associate Consultant in Cardiology. He received the Hong Kong Heart Foundation scholarship in 2017 to further undergo training in Critical Care Cardiology and Advance Heart Failure in Cedars-Sinai Medical Center, Los Angeles California, USA. He is currently in private practice and he was the program leader in the Heart Failure Program and the Physician-in-Charge of the Cardiac Care Unit in the Queen Elizabeth Hospital. His special interests include cardiac intensive care and mechanical circulatory support device, advanced heart failure, and coronary intervention.







## Management of Heart Failure Hospitalisation: Role of SGLT2 inhibitors and Practical Consideration

### Prof. TSE Hung Fat

Department Chairperson  
Chief of Service (Medicine), Queen Mary Hospital  
William MW Mong Professor in Cardiology  
Chair of Cardiovascular Medicine  
Chief of Cardiology Division  
Specialist in Cardiology  
MBBS(HK), MD(HK), PhD(HK), MRCP(UK), FRCP(Edinburgh, Glasgow,  
Lond), FHKCP, FHKAM(Medicine)

#### ABSTRACT

Heart failure is a progressive, devastating disease affecting 60 million people worldwide, and expected to increase as the population ages. There is currently a high unmet need in the treatment of heart failure, as approximately half of all those diagnosed are expected to die within five years. The sodium-glucose cotransporter 2 (SGLT2) inhibitors empagliflozin and dapagliflozin significantly reduce the risk of cardiovascular death or hospitalization for heart failure in patients with chronic heart failure with a reduced left ventricular ejection fraction (LVEF) and a preserved LVEF. Empagliflozin additionally provided evidence for in-hospital initiation of empagliflozin in patients with acute heart failure following stabilization in the EMPULSE study. Clinical benefit was observed for both acute de novo and decompensated chronic heart failure and was observed regardless of ejection fraction or the presence or absence of diabetes. In this lecture, clinical evidence and practical consideration on the use of SGLT2 inhibitors in this setting will be discussed.



## Management of Heart Failure Hospitalisation: Role of SGLT2 inhibitors and Practical Consideration

### Prof. TSE Hung Fat

#### BIOGRAPHY

Professor Hung-Fat Tse is Chairperson of the Department of Medicine, School of Clinical Medicine, Li Ka Shing Faculty of Medicine, the University of Hong Kong. He is also Chief of the Cardiology Division, Honorary Consultant and Chief of Service of the Department of Medicine at Queen Mary Hospital.

Professor Tse received his medical degree from the University of Hong Kong, Hong Kong. He completed his postgraduate training in Internal Medicine and Cardiology in the Department of Medicine, Queen Mary Hospital, University of Hong Kong, and his cardiac-electrophysiology training fellowship at the University of Michigan, USA.

Professor Tse is an international expert in cardiac pacing and electrophysiology, and cardiovascular regenerative medicine. He has significantly contributed to the understanding of the mechanisms as well as development of novel therapies for treatment of heart rhythm disorder. In addition, Professor Tse is at the forefront of applying stem cells in cardiovascular regenerative medicine. His research center and basic laboratory together with the Sun Chieh Yeh Cardiovascular Research and Training Laboratory (for large animal research) are dedicated to the training and development of novel device and biological therapies for cardiovascular diseases. Prof. Tse has published over 520 original scientific reports in international scientific journals, including New England Journal of Medicine, Nature Medicine, Lancet, Cell Stem Cell, Circulation, Blood, Journal of American College of Cardiology, Archives of Internal Medicine, American Journal of Medicine, European Heart Journal and Stem Cell.

Professor Tse's current projects include:

Basic and clinical cardiac electrophysiology;

Novel non-pharmacological therapies, such as medical devices and gene-based approaches for cardiac arrhythmias;

Non-invasive assessment of cardiovascular system, such as vascular ultrasound, CT scan and MRI; and

Cardiovascular regenerative medicine using gene-based and cell-based, including adult, embryonic and induced pluripotent stem cells.

JARDIANCE - NOW APPROVED\* for HFpEF in Macau

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Approved\* to reduce the risk of CV death or HHF in symptomatic chronic heart failure across the LVEF spectrum<sup>§1-3</sup>

25% RRR LVEF ≤ 40%<sup>§2</sup> 21% RRR LVEF > 40%<sup>§1</sup>

Established safety and tolerability profile<sup>§1-3</sup>

Simple dosing: oral, 10 mg once daily, no titration<sup>§3</sup>

Recognizing EMPEROR-Reduced and EMPEROR-Preserved trial  
**JARDIANCE** is recommended across the LVEF spectrum<sup>§4</sup>

**Jardiance**<sup>®</sup>  
 (empagliflozin)

- \* Approved in Macau for JARDIANCE 10mg in indicated adults for the treatment of symptomatic chronic heart failure in Macau
- §1 Adult patients with chronic heart failure (NYHA class III, IV) and reduced ejection fraction (LVEF ≤ 40%). Adult patients with chronic heart failure (NYHA class III, IV) and preserved ejection fraction (LVEF > 40%).<sup>1,2</sup>
- §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 25% RRR in this endpoint (HR=0.75; 95% CI: 0.69, 0.80; 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).<sup>2</sup>
- §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).<sup>2</sup>
- §4 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 composite 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 25% RRR in this endpoint (HR=0.75; 95% CI: 0.69, 0.80; p<0.001).<sup>2</sup>
- §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.<sup>3</sup>
- §6 The SGLT2i class, such as Jardiance, has gained a 3A recommendation for HFpEF and a 2a-B-R recommendation for HFrEF and HFpEF.<sup>4</sup>

Confidence interval: CV=cardiovascular; HFpEF=heart failure with preserved ejection fraction; HFrEF=heart failure with reduced ejection fraction; HFmEF=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-02)

**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/1.73m<sup>2</sup> 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 TZDM, 10 mg may be initiated or continued down to an eGFR of 20 mL/min/1.73m<sup>2</sup> 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/1.73m<sup>2</sup>), end-stage renal disease and patients on dialysis, as glycaemic efficacy depends on renal function.

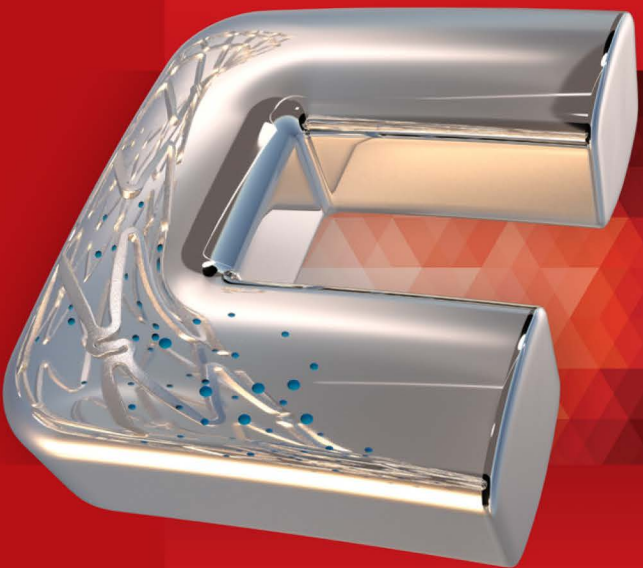
**Special warnings and precautions:** Should not be used in patients with type 1 diabetes or for treatment of ketoacidosis. Discontinue immediately when ketoacidosis is suspected or diagnosed. **Treatment:** should be interrupted in patients who are hospitalised for major surgical procedures or acute 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/1.73m<sup>2</sup>), end-stage renal disease and patients on dialysis. For HF, not recommended for use when eGFR < 20 mL/min/1.73m<sup>2</sup>. 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.

**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; Pruritus; Volume depletion; Thirst; Osmolarur filtration rate decreased, blood creatinine increased, haematocrit increased, serum lipids increased. Post-marketing experience: Ketoacidosis, complicated urinary tract infections, necrotising fasciitis of the perineum (Fournier's gangrene), allergic skin reaction, angioedema. **Storage conditions:** 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. 2023;385(16):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. 2023;383(15):1413-1424. (EMPEROR-Reduced results and the publication's Supplementary Appendix.) 3. Jardiance Hong Kong Prescribing Information. 4. Heidenreich PA, Bouillon-B, Aguilar B, 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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### Dr. LAM Ho

Cath Lab Director & Consultant at Tuen Mun Hospital, China  
Cath Lab Director & Consultant, Tuen Mun Hospital  
Honorary Clinical Associate Professor, University of Hong Kong  
Honorary Clinical Associate Professor, Chinese University of Hong Kong  
Council Member, the Hong Kong Medical Association  
Medical assessor and subcommittee member, the Hong Kong Medical Council  
Chief Editor for KH CME Bulletin & Co Chairman for HKMA CME committee  
Chairman for Tuen Mun Hospital Doctor's Association 2017-2018  
Council Member, Hong Kong Public Hospital Cardiologist Association  
Editor for Hong Kong Medical Journal  
Overseas Training via Ho Hung Chiu Foundation & CVRF:  
Aarhus University Hospital in Denmark  
Asan Medical Center in Korea  
Heart Center of Semmelweis University in Hungary  
CHUV, Switzerland

In coronary intervention, Dr Lam had won many best case awards all around the world.

In 2018, he was granted TCTAP Best Young Scientist Award. He had also received Young Achiever Award, an outstanding staff award by Hospital Authority for his contribution in cardiac service development in public hospitals as well as exemplary teacher award by Chinese University of Hong Kong.

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## Innovative Approach to Cholesterol Control

### Prof. YIU Kai Hang

#### Clinical Professor

Honorary Consultant, Queen Mary Hospital

Honorary Consultant, Grantham Hospital

Honorary Consultant, Hong Kong Sanatorium Hospital

Division Chief, Cardiology Division, University of Hong Kong-Shenzhen Hospital

Assistant Hospital Chief Executive, University of Hong Kong-Shenzhen Hospital

#### BIOGRAPHY

Prof. Yiu received his Bachelor (2001) and Doctor (2012) of Medicine degrees from the University of Hong Kong. He joined the University of Hong Kong (HKU) in 2011 as a Clinical Assistant Professor in Cardiology, promoted to Clinical Associate Professor in 2015 and Clinical Professor in 2022. He has completed his PhD in 2016 at the Leiden University, the Netherlands on “Clinical application of cardiac imaging: echocardiography and computed tomography”. He has prolifically published over 190 peer-review original articles in international peer-review journals. Among these, he was either first or corresponding author in 70 of them; including over 40 articles with impact factors exceeding 5 (Maximum 30). In addition, Prof. Yiu was one of the first in Asia (2010, Leipzig Germany) to perform transcatheter aortic valvular implantation (TAVI) and had performed over 40 procedures during his overseas training.



## Innovative Approach to Cholesterol Control

### Prof. YIU Kai Hang

Prof. Yiu' s research interest is based on Advanced Cardiovascular imaging and Big data analytics. By using various cardiovascular imaging techniques, he was able to identify subclinical cardiovascular abnormalities that improves management of patients with or at risk of cardiovascular disease. Furthermore, he has established and led three important research study projects, namely the Chinese Valvular Heart Disease study (CVATS), the Chinese Diabetic Heart Disease Study (CDATS) and the Chinese Rheumatology Heart Disease Study (CRADS). Using big data analytics, Prof. Yiu was able to evaluate epidemiology in common cardiovascular diseases as well as drug safety and efficacy. Prof. Yiu receives several key external competitive grants, including 3 GRF grants, 1 HMRF grant, ITF-midstream grant etc.. with a total of over 25 million HKD.

Prof. Yiu' s clinical interest includes interventional cardiology (coronary and structural) and advanced cardiac imaging (both invasive and non-invasive). He is also leading the cardiology service in the HKUSZ hospital and currently the deputy director of the Cardiac and Vascular centre, HKUSZ hospital. Under his leadership, the cardiology division was awarded the Key Development Specialty Award by the Shenzhen Municipal Health Commission in 2020 – 重點培育學科. He is the recipient of the 23 Australian Council on Healthcare Standards Quality Improvement Global Award, the only institute in Asia to be so recognised.



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metformin hydrochloride  
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## The UK Prospective Diabetes Study (UKPDS)<sup>1</sup>

The protective effect of metformin on CV outcomes is compared with conventional diet control in overweight patients with newly diagnosed diabetes:

- ↓36% incidence of all-cause mortality (p=0.01)
- ↓39% myocardial infarction (p=0.01)
- ↓30% composite macrovascular disease endpoint (p=0.02)

**-36%**

in overweight patients with newly diagnosed diabetes<sup>1</sup>

**Concor**<sup>®</sup>  
Bisoprolol fumarate

## Cardiac Insufficiency Bisoprolol Studies (CIBIS-II)<sup>2</sup>

Bisoprolol increases survival rate for NYHA III-IV patients, on top of standard therapy (diuretic + ACE inhibitor):

- ↓34% all-cause mortality (p<0.0001)
- ↓44% sudden death (p=0.0011)
- ↓20% all-cause hospital admissions (p=0.0006)
- ↓36% hospital admission for worsening heart failure (p<0.0001)

**-34%**

in chronic heart failure patients<sup>2</sup>

References: 1. UKPDS Research Group Lancet, 1998; 352:854-865; 2. CIBIS-II Investigators and Committees (1999) The Lancet:353-9-13.

Products: Concor 2.5mg, Concor 5mg film-coated tablets for oral use containing 2.5mg & 5mg bisoprolol fumarate, respectively. Indications: Concor<sup>®</sup> 5: 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 optionally cardiac glycosides. Concor 2.5<sup>®</sup>: Treatment of 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, 3.75, 5, 7.5, 10mg once daily at weekly consideration basis) 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 of 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 phaeochromocytoma, metabolic acidosis, hypersensitivity to bisoprolol or to any of the excipients. Warnings and precautions for use: Use with caution in: bronchospasm (bronchial asthma, obstructive airways disease; concomitant bronchodilating therapy recommended); diabetes mellitus; symptoms of hypoglycaemia can be masked; strict fasting; ongoing desensitization therapy; first degree AV block; Prinzmetal's angina; peripheral arterial occlusive disease; allergic reactions; phaeochromocytoma. Patients with psoriasis or with a history of psoriasis should only be given beta-blockers (e.g. bisoprolol) after a careful balancing of benefits and risks. Symptoms of thyrotoxicosis may be masked. In patients undergoing general anaesthesia, the anaesthetic 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 anaesthesia. Initiation of treatment of stable chronic heart failure with bisoprolol function, reactive cardiomyopathy, congenital heart disease, haemodynamically significant aortic 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 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: meloxicam, monoamine oxidase inhibitors. Pregnancy and lactation: Use of bisoprolol not recommended. 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, orthostatic hypotension, depression, sleep disorders; in patients with hypertension or angina pectoris: worsening of pre-existing heart failure, bradycardia, asthma. Rare: increased triglycerides, increased liver enzymes (ALT, ASAT) syncope, reduced tear flow, hearing disorders, allergic rhinitis, hypersensitivity reactions such as itching, flush, rash; hepatitis, potency disorders, 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. Date of product information: July 2016.

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 (normal renal function): CRF ≥30 ml/min: reduction in 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 500 mg and 1g tab is 2g daily. 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 1g once daily, while insulin dosage is adjusted on the basis of blood glucose measurements. For renal impairment patients: A CRF 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 2g for GFR 60-89 ml/min, consider dose reduction for declining renal function. Total max. daily dose of 2g 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 1g 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 <30ml/min), hepatic insufficiency, infectious diseases, following an IV 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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## What is the best Angina Management

### Dr.TAM Weng Chio

#### Membership:

2017—Macau Cardiology Association

2016 --Taiwan society of critical care medicine

2015—Taiwan society of cardiovascular intervention

2012-- Taiwan Society of Cardiology

2010-- Taiwan Society of Internal Medicine

#### **ABSTRACT**

Angina, being one of the commonest symptoms of heart diseases, is often under-diagnosed and under-managed. Approximately, half of the patients still experience angina after discharge from acute coronary syndrome. As angina is multi-factorial, the causes involve different mechanisms, and ischemia with nonobstructive coronary arteries (INOCA) is often underestimated. This lecture will investigate the underlying causes of angina and its burden, how angina affect one's quality of life. Also, it will share the latest evidence and evolution of guidelines for angina management. Traditionally, angina is managed through a step-wise approach. However, like other diseases, it is now understood that personalized management can achieve an optimal outcome for patients, and this lecture will discuss the importance and benefits for a personalized approach for patients.



## What is the best Angina Management

### Dr. TAM Weng Chio

本人譚永超(Tam Weng Chio)，於中國台灣台北醫學大學就讀醫學系，畢業後曾於台北市立萬芳醫院，長庚醫院接受內科及心臟科訓練，完成心臟內科專科完整訓練後，並於2014年正式成為心臟科主治醫師，於2017年獲中國澳門特別行政局衛生局認證心臟科專科資格，同時成為澳門仁伯爵綜合醫院的心臟科主治醫師，工作期間曾於國際期刊中發表多篇國際論文，目前也是澳門心臟學會理監事，也是台灣心臟學會及心臟介入學會，重症醫學會及內科學會會員，主要研究方向為心臟起搏器介入和冠脈介入治療，曾於社會基層醫療服務和國際會議中獲得獎項。

#### Office:

Department of Cardiology, Centro Hospitalar Conde São Januário, Macau SAR

#### Education:

2002-2009 Taipei medical university, Taiwan

#### Current Position:

2017-2022 A.H. Cardiologist, Department of Cardiology, Centro Hospitalar Conde São Januário, Macau SAR

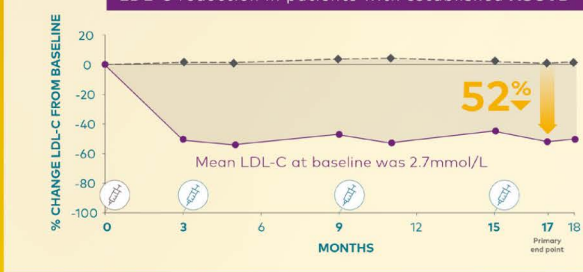
#### Professional Experience:

- 2009-2012 Resident Physician, Department of Internal Medicine, Taipei Medical University-Wan Fang Hospital
- 2012-2014 Fellow in Cardiology, Department of Internal Medicine, Taipei Medical University-Wan Fang Hospital
- 2014-2017 Physician of Cardiology, Department of Internal Medicine, Taipei Medical University-Wan Fang Hospital
- 2014-2017 Physician of critical care medicine, Department of critical care unit, Taipei Medical University-Wan Fang Hospital
- 2015-2017 Pacemaker clinical Training, Department of cardiology, Linkou Chang Gung Memorial Hospital
- 2017-2023 A.H. Cardiologist, Department of Cardiology, Centro Hospitalar Conde São Januário, Macao SAR

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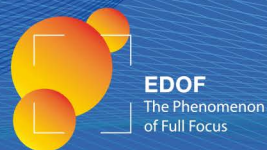
\*LEQVIO<sup>®</sup> is dosed initially, again at 3 months, and then once every 6 months.  
†LDL-C reduction was maintained during each 6-month dosing interval.<sup>1</sup>

**Study design:** ORION-10 was a multicenter, double-blind, randomized, placebo-controlled 18-month clinical trials. 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/ftg/ucm/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, Holand 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(14):1507-1519.

**Leqvio<sup>®</sup> Important notes:** 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 Transition 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. **Paediatric patients (below 16 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, infections or skin reactions. 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:** **Haemodialysis:** Considering that inclisiran is eliminated renally, haemodialysis should not be performed for at least 72 hours after inclisiran dosing. **Pregnancy, lactation, females and males of reproductive potential:** There are no or limited amount of data from the use of inclisiran in pregnant women. 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. **Fertility:** No human data. No effects on animal fertility. **Adverse drug reactions:** **Common (≥1 to <10%):** Adverse events at the injection site include 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: 1's **Legal classification:** P1S1S3 Last revision: Sep 2021 Ref: EU Dec 2020



## Let's Be Clear

Elevating the Standard of Endoscopy



## Are Statin enough? When to consider PCSK9 inhibitors

### Dr. WONG Chi Yuen

Dr Wong Chi Yuen, Eric graduated from the University of Hong Kong and received his internal medicine and cardiology training in Queen Elizabeth Hospital.

In 2010 he underwent 1 year overseas training in Mayo Clinic, Rochester in USA, specialized in Echocardiography.

Currently he is the Consultant of Queen Elizabeth Hospital, Director of Echocardiography Laboratory and in-charge of noninvasive cardiac investigation service. His interests include 3D Echocardiography, Interventional Echo during structural heart diseases interventions, management of pulmonary hypertension and hypertrophic cardiomyopathy.

He is the Council Member of Hong Kong College of Cardiology (HKCC) and member of Echo Chapter of HKCC.

Council Member  
Hong Kong College of Cardiology  
Sep 2019 - Present · 3 years 5 months

FASE  
Nov 2021 - Present · 1 year 3 months  
The American Society of Echocardiography

FRCP  
Nov 2019 - Present · 3 years 3 months

Royal College of Physicians of Edinburgh  
Honorary Clinical Associate Professor  
Aug 2017 - Present · 5 years 6 months

香港中文大學  
Honorary Clinical Assistant Professor  
Aug 2013 - Present · 9 years 6 months  
Hong Kong

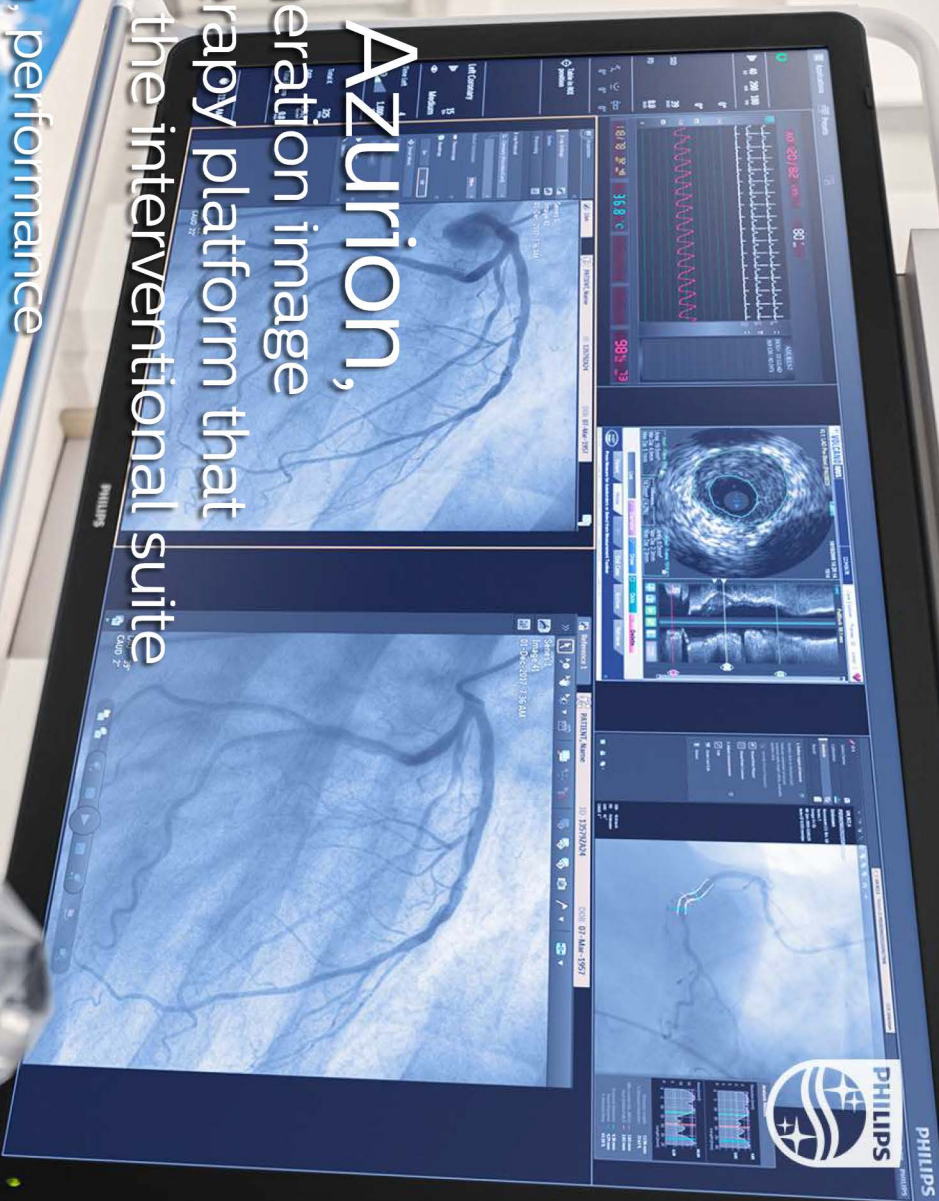
The University of Hong Kong  
Council Member

Hong Kong Public Hospital Cardiologist  
Association (HKPHCA)  
Oct 2016 - Sep 2020 · 4 years  
Hong Kong

Clinical Fellow  
Jul 2010 - Jun 2011 · 1 year  
Fellowship of Echocardiography

Philips AZurion,  
a new-generation image,  
guided therapy platform that  
transforms the interventional suite

With Azurion, performance  
and superior care become one  
innovation ✦ you





# ELIQUIS™

## THE SAFER CHOICE<sup>1,2\*</sup>

### #1 NOAC globally<sup>3</sup>

### Choose both efficacy and safety with ELIQUIS™

- The ONLY NOAC to offer both superior risk reduction in stroke/SE and major bleeding over warfarin in NVAF<sup>1,2\*</sup>
- Continued efficacy, with favorable bleeding profile regardless of bleeding endpoint, for the treatment of DVT/PE<sup>4†</sup>

\* 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<sup>4</sup>

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. IQVIA MIDAS. Days of Treatment volume a calculation of IQVIA Standard Units, Q2 2019, divided by recommended administration of each NOAC within 24hrs. [apixaban BD, dabigatran BD, edoxaban QD, rivaroxaban QD] 4. Agnelli G, et al. *N Engl J Med* 2013;369:799-808.

**ELIQUIS ABBREVIATED PACKAGE INSERT 1. TRADE NAME: ELIQUIS 2. PRESENTATION:** 2.5 mg and 5 mg film-coated tablets **3. 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  $\geq$  75 years; hypertension; diabetes mellitus; symptomatic heart failure (OHA Class  $\geq$  III). Treatment of deep vein thrombosis (DVT) and pulmonary embolism (PE), and prevention of recurrent DVT and PE in adults. For 2.5 mg only – Prevention of venous thromboembolic events (VTE) in adult patients who have undergone elective hip or knee replacement surgery. **4. DOSAGE:** Prevention of stroke and systemic embolism in patients with non-valvular atrial fibrillation (NVAF): 5 mg twice daily; 2.5 mg twice daily in patients with NVAF and at least two of the following characteristics: age  $\geq$  80 years, body weight  $\leq$  60 kg, or serum creatinine  $\geq$  1.5 mg/dL (133 micromolar). Treatment of DVT, PE and prevention of recurrent DVT and PE (VTE): 10 mg twice daily for the first 7 days, followed by 5 mg twice daily. When prevention of recurrent DVT and PE is indicated, the 2.5 mg twice daily doses should be initiated following completion of 6 months of treatment with Eliquis, 5 mg twice daily or with another anticoagulant. Prevention of VTE in elective hip or knee replacement surgery: 2.5 mg twice daily initiated 12 to 24 hours after surgery. **5. METHOD OF ADMINISTRATION:** Eliquis should be swallowed with water with or without food. For patients who are unable to swallow whole tablets, Eliquis tablets may be crushed and suspended in water or 5% dextrose in water (D5W) and immediately administered orally. Alternatively, Eliquis tablets may be crushed and suspended in 10mL of water or D5W and immediately delivered through a nasogastric tube. Crushed Eliquis tablets are stable in water and D5W for up to 4 hours. **6. CONTRAINDICATIONS:** Hypersensitivity to the active substance or to any of the excipients. Active clinically significant bleeding. Hepatic disease associated with coagulopathy and clinically relevant bleeding risk, unless or condition is considered a significant risk factor for major bleeding. Concomitant treatment with any other anticoagulant agent. **7. WARNINGS & PRECAUTIONS:** Haemorrhage risk: carefully observed for signs of bleeding. Eliquis should be discontinued if severe haemorrhage occurs. Use of thrombolytic agents for the treatment of acute ischemic stroke: There is very limited experience with the use of thrombolytic agents for the treatment of acute ischemic stroke in patients administered Eliquis. Patients with prosthetic heart valves: Eliquis is not recommended. Surgery and invasive procedures: Eliquis should be discontinued at least 48 hours prior to elective surgery or invasive procedures with a moderate or high risk of bleeding. Renal impairment: In patients with creatinine clearance  $<$  15 mL/min, or in patients undergoing dialysis, there is no clinical experience therefore apixaban is not recommended. Hepatic impairment: Not recommended in patients with severe hepatic impairment. Laboratory parameters: Clotting tests (e.g., prothrombin time (PT), international normalized ratio (INR), and activated partial thromboplastin time (aPTT)) are affected as expected by the mechanism of action of apixaban. For 2.5 mg – Spinal/epidural anaesthesia or puncture. **8. INTERACTIONS:** Eliquis is not recommended in patients receiving concomitant systemic treatment with strong inhibitors of both CYP3A4 and P-gp. Concomitant use of Eliquis with strong CYP3A4 and P-gp inducers may lead to a ~50% reduction in apixaban exposure. **9. PREGNANCY AND LACTATION:** There are no data from the use of apixaban in pregnant women. Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity. Apixaban is not recommended during pregnancy. It is unknown whether apixaban or its metabolites are excreted in human milk. A decision must be made to either discontinue breast-feeding or to discontinue/breast/abstain from apixaban therapy. **10. SIDE EFFECTS:** Common: anaemia, haemorrhage, nausea, constipation and haematomata. (Please refer to the full Prescribing Information for details). Reference: Eliquis 2.5 mg and 5 mg HK Prescribing Information (July 2019). Date of preparation: Sept 2019. Identifier number: LIQ0919. FULL PRESCRIBING INFORMATION IS AVAILABLE UPON REQUEST.

Pfizer Corporation Hong Kong Limited | 18/F Kerry Centre, 683 King's Road, Quarry Bay, Hong Kong | Tel: (852) 2811 9711 Fax: (852) 2579 0599 | Website: www.pfizer.com.hk | PP-ELI-HKG-0334 JUN 2020

Eliquis™  
apixaban



Treating patients with AF undergoing  
PCI: finding the sweet spot of treatment

## Dr. LEONG Iat Lon

澳門科技大學科大醫院 特約專科醫生 2021  
澳門醫學專科學院心內科院士 2019  
台北榮民總醫院心內科專科受訓醫師 2014 - 2015  
中山大學中山醫學院臨床醫學 2005

### 專科資格

中華人民共和國 執業醫師資格  
中華人民共和國 專科(心內科) 執業醫師資格  
澳門醫學專科學院 心內科專科醫師資格  
澳門介入心血管病學會 學術部部長  
澳門心臟學會 委員  
澳門臨床內科學會 委員  
亞太結構性心臟病青年俱樂部 銀星會員  
粵港澳大灣區心臟協會 委員

### 臨床醫學專長:

一般內科及危重症常見疾病處理  
心臟科常見疾病: 高血壓、糖尿病、高脂血症、冠心病、心力衰竭、心肌病、心瓣膜疾病、心律不整管理及治療  
心血管介入手術治療 及結構性心臟病治療  
心血管病危急重症處理: 前鏡湖醫院ECMO TEAM成員  
心臟超聲波及食道超聲波檢查, 心臟超聲造影檢查



## Treating patients with AF undergoing PCI: finding the sweet spot of treatment

### Dr. LEONG Iat Lon

國際醫學期刊發表文章:

1.Characterization of Ca<sup>2+</sup>-Sensing Receptor-Mediated Ca<sup>2+</sup> Influx in Microvascular bEND.3 Endothelial Cells March 2021 The Chinese journal of physiology

2.Tannic acid, a vasodilator present in wines and beverages, stimulates Ca<sup>2+</sup> influx via TRP channels in bEND.3 endothelial cells March 2020 Biochemical and Biophysical Research Communications 526(1)

3.Lysophosphatidylcholine-induced cytotoxicity and protection by heparin in mouse brain bEND.3 endothelial cells July 2018 Fundamental and Clinical Pharmacology 33(1)

4.Valproic acid inhibits ATP-triggered Ca<sup>2+</sup> release via a p38-dependent mechanism in bEND.3 endothelial cells May 2018 Fundamental and Clinical Pharmacology 32(5)

5.Attaining cholesterol goals: will aiming for lower targets improve the score?

November 2017 Current Medical Research and Opinion 34(2):1-6

6.Eicosapentaenoic acid triggers Ca<sup>2+</sup> release and Ca<sup>2+</sup> influx in mouse cerebral cortex endothelial bEND.3 cells November 2016 The Journal of Physiological Sciences 68(1)

7.An Extraordinary Case of Silent Extensive Anterior Wall Myocardial Infarction Complicated with Giant Left Ventricular Aneurysm and Dressler Syndrome January 2014 World Journal of Cardiovascular Diseases 04(06):294-298

# REDEFINING EXPECTATIONS

## For Those At Risk Of Cardiovascular Events



**↓ 15% reduction in MACE**  
HR (95% CI) 0.85 (0.78-0.93)  
 (Primary composite endpoint)<sup>1,2,‡</sup>

Reduction in:		Hazard Ratio (95% CI)
Non-fatal MI†,§	14%	0.86 (0.77, 0.96)
Fatal / Non-fatal Ischemic stroke†,§	27%	0.73 (0.57, 0.93)
UA requiring hospitalization†,§	39%	0.61 (0.41, 0.92)

Label update for prevention of CV events in established cardiovascular disease patients\*!

MI / Stroke / UA Hospitalization

#### Safety Data:

Adverse events include nasopharyngitis, injection site reactions, influenza, urinary tract infection, diarrhea, bronchitis, myalgia, muscle spasms, sinusitis, cough, contusion and musculoskeletal pain, which were reported in at least 2% of PRALUENT<sup>®</sup>-treated patients, and more frequently than in placebo-treated patients.

\* PRALUENT<sup>®</sup> is indicated to reduce the risk of myocardial infarction, stroke, and unstable angina requiring hospitalization in adults with established cardiovascular disease. PRALUENT<sup>®</sup> is also indicated as an adjunct to diet, alone or in combination with other lipid-lowering therapies (e.g., statins, ezetimibe), for the treatment of adults with primary hyperlipidemia to reduce low-density lipoprotein cholesterol (LDL-C).

† Statistical testing performed outside hierarchy; therefore not considered statistically significant.

‡ Primary composite endpoint of death from coronary heart disease, nonfatal myocardial infarction, fatal or nonfatal ischemic stroke, or unstable angina requiring hospitalization.

§ Major secondary end points (HR, 95% CI), in order of hierarchical testing, include any coronary heart disease event (0.88, 0.81-0.95), major coronary heart disease event (0.88, 0.80-0.96), any cardiovascular event (0.87, 0.81-0.94), composite of death from any cause, nonfatal myocardial infarction, or nonfatal ischemic stroke (0.86, 0.79-0.93), death from coronary heart disease (0.92, 0.76-1.11), the hierarchical analysis was stopped after the first nonsignificant P value was observed, in accordance with the hierarchical testing plan), death from cardiovascular causes (0.88, 0.74-1.05) and death from any cause (0.85, 0.73-0.98). To adjust for multiplicity, the results of the main secondary end points were to be tested in hierarchical fashion in the sequence listed above if the risk of the composite primary end point was found to be significantly lower in the alicoramab group than in the placebo group.

Study Design<sup>1,2</sup>  
 ODYSSEY OUTCOMES is a multicenter, randomized, double-blind, placebo-controlled trial involving 18,924 patients who had an acute coronary syndrome 1 to 12 months earlier, had a low-density lipoprotein (LDL) cholesterol level of at least 70 mg per deciliter (1.8 mmol per liter), a non-high-density lipoprotein cholesterol level of at least 100 mg per deciliter (2.6 mmol per liter), or an apolipoprotein B level of at least 80 mg per deciliter, and were receiving statin therapy at a high-intensity dose or at the maximum tolerated dose. Patients were randomly assigned to receive alicoramab subcutaneously at a dose of 75 mg (9462 patients) or matching placebo (9462 patients) every 2 weeks. The dose of alicoramab was adjusted under blinded conditions to target an LDL cholesterol level of 25 to 50 mg per deciliter (0.6 to 1.3 mmol per liter).

MACE=major adverse cardiovascular events. MI=myocardial infarction. UA=unstable angina. PCSK9=Proprotein convertase subtilisin/kexin type 9. CVD=cardiovascular disease. HeFH=Heterozygous Familial Hypercholesterolemia.

#### Reference:

1. Praluent<sup>®</sup> Prescribing Information. Mar 2020. 2. Schwartz GG, et al. N Engl J Med. 2018;379:2097-2107.

Presentation: Alicoramab solution for injection. Indications: Prevention of Cardiovascular Events: Reduce risk of myocardial infarction, stroke and unstable angina requiring hospitalization in adults with established cardiovascular disease. Primary Hyperlipidemia (incl. heterozygous familial hypercholesterolemia): As an adjunct to diet, alone or in combination with other lipid-lowering therapies, for the treatment of adults with primary hyperlipidemia to reduce LDL-C. Dosage: 75 mg once every 2 weeks administered subcutaneously. An alternative starting dosage for patients who prefer less frequent dosing is 300 mg once every 4 weeks. If the LDL-C response is inadequate, the dosage may be increased to the maximum dosage of 150 mg administered every 2 weeks. Contraindications: History of serious hypersensitivity reaction to alicoramab. Precautions: Hypersensitivity reactions. Pregnancy and Lactation: There are no available data on use of alicoramab in pregnant women to inform a drug-associated risk. There is no information regarding the presence of alicoramab in human milk, the effects on the breastfed infant, or the effects on milk production. Undesirable effects: Nasopharyngitis, injection site reactions, influenza, urinary tract infection, diarrhea, bronchitis, myalgia, muscle spasms, sinusitis, cough, contusion, musculoskeletal pain, flu-like illness, angioedema. For other undesirable effects, please refer to the full prescribing information. Preparation: 1 x 75mg/ml pre-filled pen, 1 x 150mg/ml pre-filled pen. Legal Classification: Part 1, First & Third Schedules  
 Poison Full prescribing information is available upon request.

API-HK-ALI-20.07

Sanofi Hong Kong Limited  
 1/F & Section 212 on 2/F, AXA SOUTHSIDE,  
 38 WONG CHUK HANG ROAD, WONG CHUK HANG, HONG KONG  
<http://www.sanofi.hk/>

sanofi

Praluent<sup>®</sup>  
 alicoramab

# Treating angina where it matters

# VASTAREL<sup>®</sup> MR

Trimezidine

2 tablets daily

Recently diagnosed  
angina patient

ACTS  
**DIRECTLY**  
AT CARDIAC  
CELL LEVEL

// **INCREASES**  
ATP level by 33%<sup>1</sup>

// **REDUCES**  
frequency of angina attacks<sup>2,3</sup>

// **IMPROVES**  
exercise capacity<sup>2,3</sup>

**2 tablets daily**



**COMPOSITION\***: Vastarel 35mg, modified-release film-coated tablet containing 35mg trimetazidine. **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. **DOSAGE and ADMINISTRATION\*\***: The dose is one tablet of 35mg of trimetazidine twice daily during meals. Benefit of the treatment should be assessed after three months and trimetazidine 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. Parkinson disease, parkinsonian symptoms, 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 coronarily should be revascularized and an adaptation of the treatment considered. Trimetazidine can cause or worsen parkinsonian symptoms (tremor, akinesia, hypertonía), 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**: **FERTILITY**: **PREGNANCY**: Avoid prescription. **BREASTFEEDING\*\***: Should not be used. **DRIVE & USE MACHINES**: 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, extrasystoles, tachycardia, arterial hypotension, orthostatic hypotension that may be associated with malaise, dizziness or fall, in particular in patients taking antihypertensive treatment; flushing. Not known: parkinsonian symptoms (tremor, akinesia, hypertonía), gait instability, restless leg syndrome, other related movement disorders, usually reversible after treatment discontinuation, sleep disorders (insomnia, droiveness), vertigo, constipation, AIGP (acute generalised exanthematous pustulosis), angioedema, agranulocytosis, thrombocytopenia, thrombocytopenic purpura, hepatitis. **OVERDOSE**: **PROPERTIES**: Trimetazidine acts as a metabolic agent, preserving the myocardial high-energy phosphate intracellular levels. Anti-ischaemic 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. [www.servier.hk](http://www.servier.hk) \*For complete information, please refer to the complete Summary of Product Characteristics.

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

**SERVIER**  
moved by you



**SERVIER HONG KONG LIMITED**  
31/F, Tower 5, The Gateway, 15 Canton  
Road, Harbour City, Tsim Sha Tsui, Kowloon,  
Hong Kong  
Tel: (852) 2877 1922 Fax: (852) 2890 5703  
[www.servier.hk](http://www.servier.hk)

A photograph of a woman with long brown hair, wearing a white tank top, lying in bed and sleeping peacefully. A small, white, rectangular RootiRx device is attached to her chest. The background is a soft, out-of-focus white.

# RootiRx

S Y S T E M

## Continuous ECG Recorder

RootiRx is a compact heart-monitoring device that captures a single-lead ECG signal continuously up to 7 days. It's easy to wear on the chest and used comfortably in daily activities.



*Glidesheath Slender*

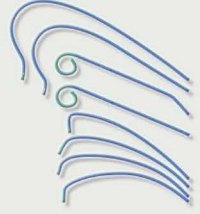


Access



*RADIFOCUS Guide Wire M*

*RADIFOCUS Optitorque*



Target



*VISICUBE*

**Total solution from Terumo  
From Access to Closure**



Intervene



*AltaView*

Close



*TR Band*



*Angio-Seal VIP*



*Accuforce*



*Ryurei*



*Ultimaster Tansei*



Essential Brands to  
Cardiovascular Risk Management  
at Every Stage of Life



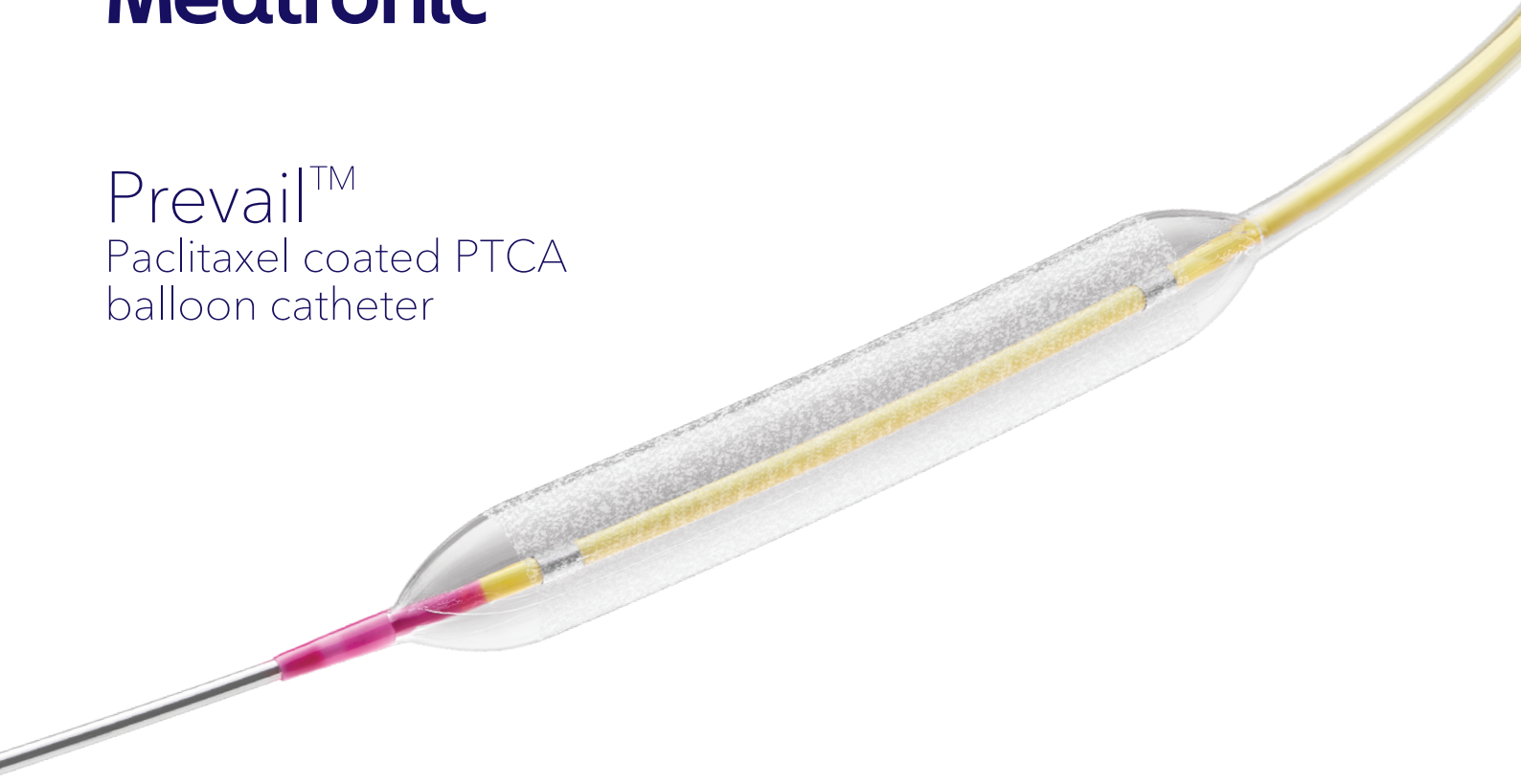
In Doctors We Trust

Viatrix Healthcare Hong Kong Limited | Sui-tes 2401-07 & 12, 24/F, One Island East, 18 Westlands Road, Quarry Bay, Hong Kong  
Tel: +852 2290 7100 Fax: +852 2673 0068 Website: www.viatrix.com © 2021 VIATRIS - All Rights Reserved PP-CAD-HKG-6011 NOV 2020



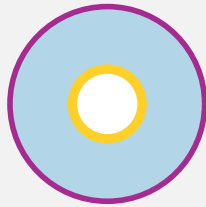
# Medtronic

## Prevail™ Paclitaxel coated PTCA balloon catheter

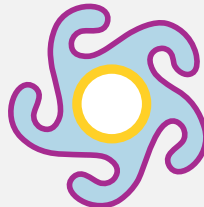


### Open coating process - reliable, uniform FreePac coating.†

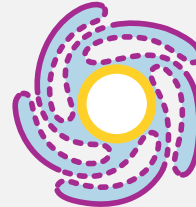
— FreePac coating    - - - Protected FreePac coating



Balloon open while FreePac coating is applied

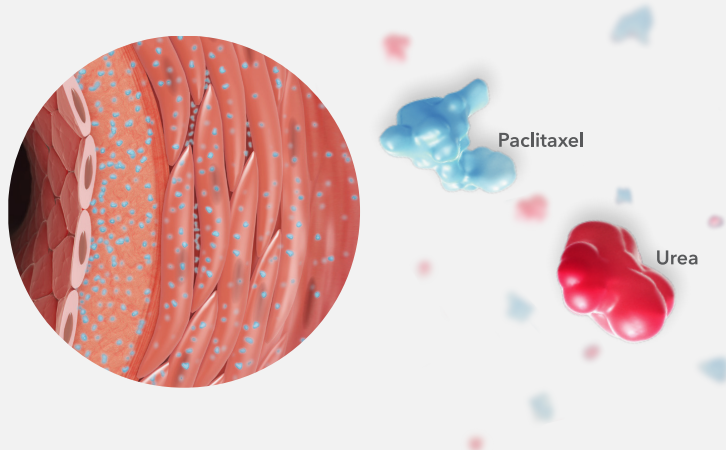


Balloon folding



65% of drug is protected within the folds<sup>2</sup>

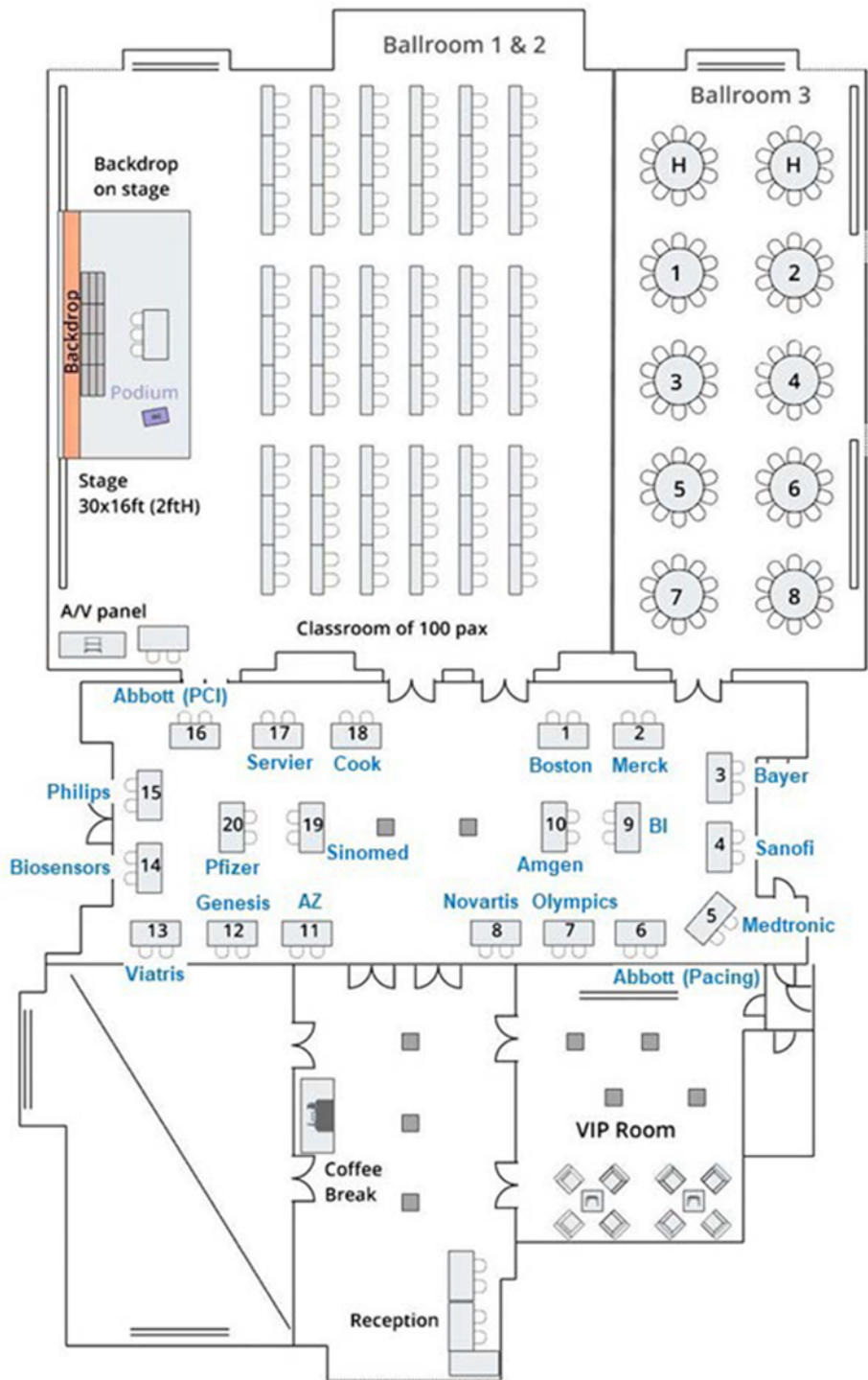
### Rapid absorption of Paclitaxel<sup>1</sup>



† Prevail Instructions for Use.

<sup>1</sup> Based on bench test data. Bench test data may not be indicative of clinical performance.

<sup>2</sup> Depending on DCB fold configuration. D00277875 report on file at Medtronic.







**澳門介入診療學會學術年會2023**  
ASSOCIAÇÃO DE DIAGNÓSTICO E DE TERAPÊUTICA DE INTERVENÇÃO DE MACAU  
**ANNUAL SCIENTIFIC CONFERENCE 2023**