中華民國血脂及動脈硬化學會 112 年會員大會暨
第二十二屆台北國際血管分子生物學研討會

The Annual Scientific Meeting of Taiwan Society of Lipids & Atherosclerosis 2023 and
The 22nd Taipei International Vascular Biology Symposium

2023 年 9 月 16-17 日

造浪必有因，血脂是成因

油選之人

Lipid Matters!

Taiwan Society of Lipids and Atherosclerosis

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Welcome Message

Dear Colleagues and Friends,

We are delighted to extend our heartfelt invitation on behalf of the Taiwan Society of Lipids & Atherosclerosis to the upcoming 2023 Annual Meeting. It is with great honor that we welcome you to join us.

Anticipation is running high as we prepare for an extraordinary conference that promises to reach a broader global audience than ever before. We anticipate active participation from individuals around the world, making this event truly exceptional.

The conference will serve as a platform for the exchange of cutting-edge research findings in the fields of Lipids & Atherosclerosis. By participating in the 2023 TSLA Annual Meeting, you will have the opportunity to engage in discussions about the latest advancements in these areas and gain access to the most current updates in clinical and foundational science. With a diverse range of 20 sections, you will find it effortless to connect with esteemed speakers and engage with your fellow peers.

We eagerly look forward to an exhilarating gathering, and we are confident that you will acquire valuable new insights and knowledge.

With warm regards,

Po-Hsun Huang

Po-Hsun Huang, M.D., Ph.D.
President, Taiwan Society of Lipids & Atherosclerosis

Program Overview

DAY 1 Saturday

	601	602	603
13:00 | 15:40	**Plenary Session 1** 「菸火相傳~ 我遇到最具挑戰的戒菸個案」 短文競賽 (14:00 - 15:30)	**Plenary Session 4** 2023國科會心臟學門與 血脂與動脈硬化學會合辦專題: 面對AI與ChatGPT來襲， 身處造浪中的心臟血管專家們 如何應對？ (14:00 - 15:50)	心血管疾病防治網 繼續教育課程
15:40 | 16:00	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
16:00 | 16:40	**Plenary Session 2** TSH 東生華 (直播)	**Plenary Session 5** NOVARTIS 諾華	**Plenary Session 7** BAYER 拜耳
16:40 | 16:50	DINNER BREAK		
16:50 | 18:40	**Plenary Session 3** 血脂治療的藥物經濟學及 大數據分析	**Plenary Session 6** FH	心血管疾病防治網 繼續教育課程 (16:50 - 17:50)

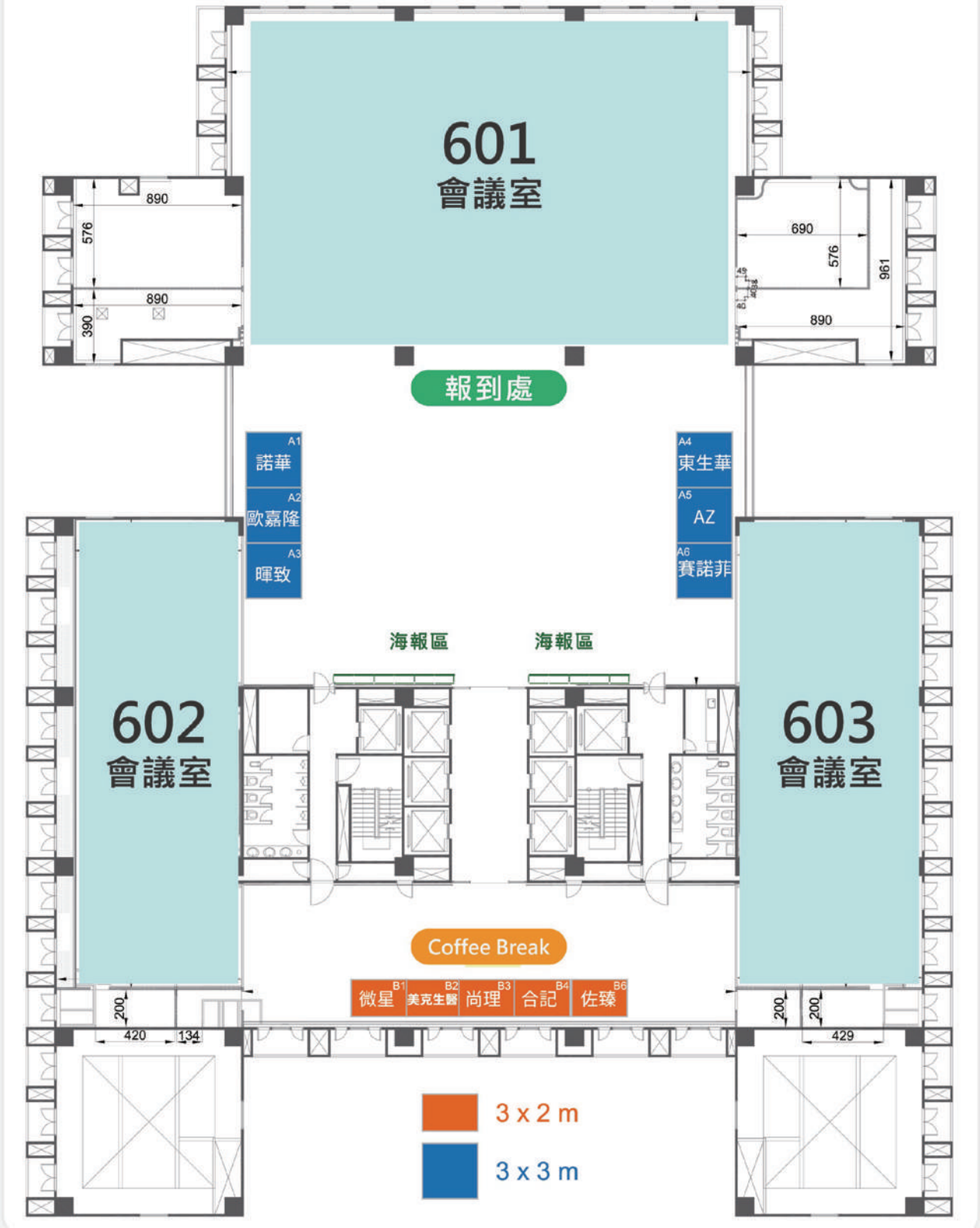
DAY 2

Sunday

	601	602	603
09:00 | 10:30	The 22nd Taipei International Vascular Biology Symposium	精準營養於心臟血管代謝疾病防治之運用: 精心防治飲食	國衛院：從血脂、代謝、血流到動脈硬化及主動脈瘤
10:30 | 10:45	POSTER COMPETITION		
10:45 | 12:15	The 22nd Taipei International Vascular Biology Symposium	精準營養於心臟血管代謝疾病防治之運用: 精心防治飲食	Joint Symposium (心肌梗塞學會)
12:15 | 12:30	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
12:30 | 13:10	Lunch Symposium 1 VIATRIS 輝致 (直播)	會員大會 (12:25 - 12:55)	Lunch Symposium 4 TANABE 台田 (12:30 - 13:15)
13:10 | 13:50	Lunch Symposium 2 SANOFI 賽諾菲 (直播)	Research Award & Poster Competition (12:55 - 13:20)	姜必寧得獎者演講 (13:15 - 13:45)
13:50 | 14:00	COFFEE BREAK	Lunch Symposium 3 ORGANON 歐嘉隆 (13:20 - 14:00)	COFFEE BREAK
14:00 | 15:30	油選之人的歸宿——民主的體重管理	DM Symposium	Joint Symposium (台灣血脂衛教學會) From old to new lipid treatment – A long story

Floor Plan

財團法人張榮發基金會 國際會議中心 6F 平面圖



DAY 1

September 16th, 2023 | Saturday

PROGRAM

PLENARY SESSION 1:
「菸火相傳~我遇到最具挑戰的戒菸個案」短文競賽


魏芳君
理事長


賴裕和
監事長


黃柏勳
理事長


葉宏一
名譽理事


鄭建興
監事


李俊偉
醫師

14:00 - 14:05
開幕致詞
Moderator: 葉宏一 名譽理事 / 中華民國血脂及動脈硬化學會

14:05 - 14:10
來賓致詞
Moderator: 魏芳君 理事長 / 台灣菸害防制暨戒菸衛教學會

14:10 - 14:25
「菸火相傳~我遇到最具挑戰的戒菸個案」短文競賽 頒獎典禮

PS1-1 14:25 - 14:35
得獎者分享 - 金獎
Moderator: 葉宏一 名譽理事 / 中華民國血脂及動脈硬化學會

PS1-2 14:35 - 14:45
得獎者分享 - 銀獎1
Moderator: 魏芳君 理事長 / 台灣菸害防制暨戒菸衛教學會

PS1-3 14:45 - 14:55
得獎者分享 - 銀獎2
Moderator: 賴裕和 監事長 / 台灣菸害防制暨戒菸衛教學會

14:55 - 15:00
綜合討論
Moderator: 葉宏一 名譽理事 / 中華民國血脂及動脈硬化學會

PS1-4 15:00 - 15:20
Influence of smoking cessation treatment service contest on the success rate of quitting smoking
Moderator: 鄭建興 監事 / 台大醫院 神經內科
Speaker: 李俊偉 醫師 / 台北馬偕 心臟內科

15:20 - 15:25
Q&A
Moderator: 鄭建興 監事 / 台大醫院 神經內科

15:25 - 15:30
閉幕致詞
Moderator: 黃柏勳 理事長 / 中華民國血脂及動脈硬化學會

「菸火相傳~我遇到最具挑戰的戒菸個案」短文競賽
金獎

作者：郭于菁 個案管理師
服務單位：國立陽明交通大學附設醫院

戒菸過程最需要身旁家人朋友們互相鼓勵及支持，這次服務的戒菸個案，是國標舞學生揪老師一起來戒菸的分享。

因為胸悶心悸及咳嗽不適的情況約有一個月的鄭大哥，他來到心臟科門診就診，醫師安排了抽血及心電圖X-ary檢查，一個禮拜後門診追蹤檢查結果，報告一切正常。

因為心悸關係讓鄭大哥睡眠品質變得不太理想，漸而影響到隔天的國標課程。回診心臟科時，醫師解釋了理學檢查的結果一切正常，心悸很大的原因有可能是因為吸菸所影起的，建議鄭大個戒菸並轉介戒菸門診。

從戒菸門診接觸到鄭大哥，一開始鄭大哥確實沒有想戒菸的想法，他覺得心悸就是心臟的問題跟戒不戒菸關係不大，是因為心臟科醫師直接轉介，他無法拒絕所以只能來戒菸門診了解看看。

一開始跟鄭大哥會談的過程才知道他是從台北退休後回到宜蘭的公務人員，吸菸20年，一天菸量約為20支，平時習慣與一群國標舞老師一起練習國標舞，但他們的舞團是到各舞廳去表演，所以跳舞場所滿多人會吸菸的，大家表演結束後就會互相請個菸當作慶祝，也因為這樣戒不戒菸似乎不這麼重要。

會談後並介紹戒菸相關服務及藥品，鄭大哥對著我說：「我就只試試看，兩個禮拜後我也不一定會回診。」我跟鄭大哥說：「沒關係，願意踏出戒菸第一步，我們就嘗試看看，也給自己一個機會，並送上我們設計的戒菸輔助衛教包(內容物：八仙果、涼感巾、刷牙組)」。

二週後，鄭大哥並沒有爽約，依照時間回戒菸門診，測量了CO，從二週前的原本的9PPM　降至3PPM，鄭大哥看了很有感觸，覺得自己把菸量降低了平均每天約5 支菸，一氧化碳數值也降了。他說其實剛開始幾天他並沒有使用戒菸貼片，而是自己控制不吸菸，但他發現太想抽菸反而讓他心情很焦躁，心悸感就更明顯。想到我跟他說的，如果有心煩氣躁的感覺就需要開始使用戒菸藥物幫忙，才把戒菸貼片貼上，也因為使用了藥物他才能順利減少菸量，想抽菸的時候會先吃上幾顆衛教包裡的八仙果，吃起來涼涼的確實打消不少菸癮。

這次回診的會談感受的到鄭大哥嘗試戒菸後而開始有較強烈的戒菸動機，因為CO　數值降低了不少，更提升戒菸動力，衛教結束後一樣約二週後再回診。

二週後鄭大哥時旁邊多了一位女性，是一位體態保持很好的女性，鄭大哥跟我說：「個管師，這是我國標舞的老師，她也是吸菸很久的。最近她看我都沒什麼在抽，我才跟老師說我在戒菸，就找老師一起來戒菸了。」

國標老師吸菸25年，每天25支，以前工作是因為需要洽談生意的商人，需要到處應酬菸癮就越來越大。因為開始接觸國標後，發現女生在公開場合吸菸確實會遭人異樣眼光，自己有減少菸量但也是失敗了。這一次看到鄭大哥在戒菸就想說有伴就一起試試看。

這次回診鄭大哥不會有匆匆想離開的感覺，反而開始分享他這四週的戒菸歷程，菸量如何變少的，搭配戒菸輔助包來調適戒菸的戒斷症狀，自己在戒菸的第二週改掉睡前抽菸的習慣，也因為這樣他自己心悸的感覺緩解很多，睡眠狀態也好很多心情上也不再那麼鬱悶。

鄭大哥跟國標老師說，戒菸過程最怕就是自己孤孤單單，老實說啦~~一開始我對個管師的態度冷冷的，但她們很專業並沒有因為我的撲克臉而對我態度冷淡，反而給我一些專業的建議，也願意聽我抱怨東抱怨西的。來戒菸還有這個衛教包可以拿，我不認真戒菸也對她們太不好意思了吧。鄭大哥對著國標老師說，現在我就是你的戒菸之友，以後跳完舞換我們就不要跟著菸友去〝呼吸空氣〞了，留在室內吹冷氣喝果汁啦。

鄭大哥與國標老師從111年12月至112年3月一起完戒菸的療程，目前也持續保持不吸菸的狀態。在這三個月的戒菸衛教服務裡，讓我在工作中獲得最大的成就感是個案把你當信任的人，願意分享他生活中所遇到的事情，讓我們從中能幫助他們，使戒菸的過程中不再只有督促、提醒吸菸對身體危害的方式，反而是像朋友一樣陪伴、傾聽，適時地提供建議。謝謝我的個案們，對衛教師的信任及肯定，讓我們在工作中不再只是看著戒菸成功率是否達成，而是成為他們戒菸過程中支持的夥伴。

「菸火相傳~我遇到最具挑戰的戒菸個案」短文競賽銀獎

作者：吳玫諭 護理師
服務單位：國立臺灣大學醫學院附設醫院雲林分院

「曾經戒菸108 次，每次戒每次失敗」。這是陳先生在104年醫院戒菸支持團體成立記者會時跟大家分享自己的戒菸經驗。10幾歲開始抽菸，菸齡40幾年，一天至少都要抽1-2包，常常因身上有菸臭味被家人嫌棄。近10年來因工作不順利罹患憂鬱症，一天最多的時候曾經抽到5包菸。相信要輔導一位飽受情緒困擾的憂鬱症患者戒菸，對戒菸衛教師而言都是巨大的挑戰。

104年陳先生在接受戒菸藥物及衛教後，短暫戒菸4-5個月，因無法克服情緒因素，加上飽受疼痛之苦，除了要看身心科，每週固定還要看疼痛科打止痛針。雖然他不斷復抽，我還是不放棄，每次回診都去門診追蹤他，邀請他到衛教室來坐坐，聊聊近日的狀況，傾聽他心情煩悶的原因。雖然每次談論的原因可能都是一樣，但是對於一位憂鬱症患者，不僅僅是告訴他戒菸技巧，陪伴、傾聽、關心也是重要的衛教技能。雖然自己沒有精神科的照護經驗，也不是特別優秀的衛教師，只有一顆熱誠的心。後來，發現他每次回診必定會主動來找妳，覺得在衛教師這兒很安心，可以毫無顧忌地說出心裡的話，自己也會趁著幫他量體重量血壓時，說些讚美鼓勵的話~「很棒喔！快一個月沒抽菸了耶！最近氣色看起來很好喔！最近有什麼令您開心的事嗎？」雖然斷斷續續來戒菸，但是也是「沒抽」、「復抽」不斷輪迴著。

直到110 年初，他又來掛門診戒菸，問我：「有人像我這樣戒100 多次都戒不掉嗎？」我拍拍他的肩膀回他：「只要你想戒菸，我們都不會放棄你的。」也許這番話真的激勵了他，這次追蹤了一年都沒再復抽終於成功擺脫菸癮。但是他還是跟之前一樣，來門診時都會來找我say哈囉，請我幫他量體重，話家常...。

從事戒菸衛教師工作13 年，對我而言，這真的是最具挑戰的一位個案，輔導6 年多才成功戒菸，也讓自己對困難戒菸者的衛教更有自信，期望與大家分享~永不放棄每一個想戒菸的朋友。跟往常一樣在醫院忙碌地過了一天，夏季的西北雨來得兇猛去得也快，下班走出醫院時雨也停了，雨過天晴看到遠處的那道彩虹，不由自主地讚嘆~好美！戒菸衛教過程雖然辛苦，但是能看到他們成功戒菸，真的很開心，此刻的心境，就像那道彩虹般~炫麗無比。

「菸火相傳~我遇到最具挑戰的戒菸個案」短文競賽
銀獎

作者：簡宛晴 戒菸衛教師
服務單位：國泰醫院社區護理組

黃先生48歲，菸齡30年，是一位卡車司機。載魚貨往返於屏東及台北，由於路途遙遠，仰賴抽菸提神，每天1包。此次初診斷大腸癌入院化療，計畫先將腫瘤縮小再手術。個案未婚與案母同住，訪視時個案獨自在病室，對戒菸衛教師來訪表現出生氣不耐煩態度，主訴「得癌症化療已經很痛苦了，現在談什麼戒菸」、「我也知道抽菸不好，就戒不掉阿」、「我不讓老媽來醫院，怕她擔心，我抽菸她會一直唸我要戒」，個案嘴巴雖說不想要戒菸衛教師介入，但實際上卻自己一股腦地說不停，我知道他在宣洩罹癌這段日子，不知道可以跟誰訴說的煩悶及痛苦。就算個案態度語氣差，我也是靜靜地聽著，同理他，並適時地回應，個案同意我後續追蹤。

第一次電訪，個案工作暫停，在家養病持續化療中，已經減少菸量了，但心情不好時還是會抽菸，而且會躲著媽媽抽，怕她擔心，此時衛教個案可以使用戒菸藥物幫忙，但個案覺得化療已經很多副作用了，不想再使用戒菸藥物，故與個案討論其他戒菸方法，例如打手遊、追劇等轉移對菸的注意力。第二次電訪，個案完成手術了，手術影響到肛門括約肌，出現滲便情形，要包尿布，心情很煩時會抽幾口菸就丟掉，抽完又有罪惡感，予同理個案明知不該抽又抽的心情，鼓勵個案說出想戒菸的理由是為了健康，而戒菸就是為了促進健康，加強其戒菸動機。第三次電訪表示滲便情形慢慢改善了，現在只有在開車的時候還是會抽菸，自覺是一種改不掉的習慣動作，習慣手裡要拿著、嘴裡要叼著，衛教可以選擇一些長條棒狀，且低糖低熱量的食物取代菸，例如蒟蒻條、魷魚絲等。第四次電訪，個案笑著告訴我:「衛教師妳知道嗎?我聽妳的話，後來我找到用脆迪酥，妳知道一根長長的脆迪酥餅乾嗎?我買一桶放車上，當我想抽菸時，我就拿一根脆迪酥出來，含著脆迪酥慢慢化掉慢慢吃，中間有洞洞也可以像抽菸一樣吸氣吐氣，當我含完一根脆迪酥時，我就告訴自己已經抽一根煙了不能再抽，一整天最多含三根啦，我沒有變胖，已經二個月沒碰菸了，不用再躲著媽媽抽菸了，同事看我拿脆迪酥當菸抽的樣子覺得好好笑，他們也說要試試看」。

此個案從一開始抗拒戒菸，到後來在戒煙衛教師的陪伴及幫助下，嘗試各種戒菸方法，最後找到自己可以做到的方式成功戒菸，並在潛移默化中影響同事萌生戒菸想法。衛教師運用傾聽、同理、同時以專業衛教知識為背景，陪伴及引導個案戒菸，不僅幫助個案成功遠離菸害，也做到社會健康促進的角色，這是身為戒菸衛教師最大的成就感。

601 | 15:00 - 15:25

Influence of smoking cessation treatment service contest on the success rate of quitting smoking

李俊偉 醫師 / 台北馬偕 心臟內科

菸品是國人健康頭號殺手，菸煙中有超過7千多種化學物質，會嚴重傷害吸菸者及週遭人及民眾的健康。菸害在台灣每年造成至少2萬人死亡，每25分鐘就有1人死於菸害；不但會造成癌症，還會造成心臟病、中風、胎兒異常，一手菸、二手菸都有嚴重危害，所造成的社會經濟成本，總計高達約1441億元，包括數百億元之額外的健保醫療支出。

國健局於101年3月推出「二代戒菸治療試辦計畫」，從吸菸者所繳的菸品健康福利捐，提撥經費來幫助吸菸者戒菸，進一步幫全民節省健保支出。適逢二代戒菸服務滿周年，由資料顯示，不僅服務更便捷，服務量提升近4成，大幅降低戒菸者的經濟負擔，6個月點戒菸成功率更達3成以上。且3個月及6個月後皆有專人提供後續的輔導及追蹤，維持戒菸意志力並提高戒菸成功率。

然而可惜的是,其他的醫師戒菸的比例並不是很高(二代戒菸治療試辦計畫幾乎都是由家醫科胸腔科參與),然而某些科的患者卻是能從戒菸當中獲得最大利益的族群(例如心臟科的心肌梗塞 腦神經科的中風等等); 2018-03-10 七大學會(Cardiology, Diabetology, Diabetes Educators, Intervention, Lipids & Atherosclerosis, Nephrology, Stroke)決定聯手打擊菸害於是一起召開了會議,並達成以下共識：

1. Encourage members to provide smoking cessation service
2. Promote training and service by contest

於是展開了戒菸競賽服務,在此我們分享戒菸競賽四年多的成果療效以及細部分析。

李俊偉 醫師
台北馬偕 心臟內科

Present Position 現職

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馬偕紀念醫院 心臟內科
病房主任
馬偕紀念醫院

Education 學歷

醫學士
台北醫學大學 醫學系

PLENARY SESSION 2:
TSH Biopharm


吳彥雯
常務理事


陳昭姿
主任


杜宗明
醫師


歐凰姿
教授

PS2-1 **16:00 - 16:15**

From Guidelines to Practice: Implementing Single-Pill Combination for Improved Lipid Management in Clinical Settings

Moderator: 吳彥雯 常務理事 / 亞東醫院 心臟內科
Speaker: 杜宗明 醫師 / 亞東醫院 心臟內科

PS2-2 **16:15 - 16:35**

Beyond Clinical Benefits: Exploring the Economic Implications of Single-Pill Combination Therapy in Lipid Control

Moderator: 陳昭姿 主任 / 和信醫院 藥學進階教育中心
Speaker: 歐凰姿 教授 / 成功大學 臨藥所

16:35 - 16:40

Panel Discussion & Closing Remarks

Moderator: 吳彥雯 常務理事 / 亞東醫院 心臟內科

16:40 - 16:50

Dinner Break

601 | 16:00 - 16:15

From Guidelines to Practice: Implementing Single-Pill Combination for Improved Lipid Management in Clinical Settings

杜宗明 醫師 / 亞東醫院 心臟內科

This presentation delves into the utilization of ezetimibe-statin combination therapy with the purpose of enhance lipid management in clinical settings. By examining the evidence behind statin therapy, changes in guidelines regarding non-statin combination treatments, and the pivotal findings of the 2022 RACING trial, this discussion underscores how recent advancements are shaping lipid management strategies. Moreover, the implementation of real-world data (RWD) within the RACING trial framework to validate linearly adds a new dimension to the conversation. The aim is to highlight the potential benefits of integrating single-pill combination therapy into Taiwan's clinical practice and how it can yield better preventive outcomes for cardiovascular events.

The foundation of statin therapy has been firmly established through compelling evidence demonstrating its efficacy in lipid control and cardiovascular risk reduction. However, evolving guidelines have recognized the potential benefits of combining non-statin therapies to optimize lipid management, particularly in high-risk patients.

The groundbreaking 2022 RACING trial provides a significant leap forward by offering randomized controlled trial (RCT) results that shed light on the added value of ezetimibe-statin combination therapy. This trial's structure and outcomes lay a foundation for exploring the real-world application of its findings, a concept that is further explored by utilizing real-world data (RWD) to verify its effectiveness in diverse clinical settings.

As Taiwan's clinical practice aligns with evidence-based medicine, the incorporation of single-pill combination therapy emerges as a promising approach. This therapeutic strategy, validated through rigorous RCTs and subsequent real-world validation, underscores the importance of bridging the gap between clinical trials and actual practice.

Anticipating the potential for improved preventive outcomes against cardiovascular events, the adoption of ezetimibe-statin combination therapy offers a progressive shift in the landscape of lipid management. This presentation seeks to empower clinicians by providing insights into the most recent advances in lipid treatment, with a focus on incorporating single-pill combination therapy into clinical practice. The ultimate goal is to optimize lipid management strategies and provide patients with a better outlook in their cardiovascular health journey.

杜宗明 醫師
亞東醫院 心臟內科

Present Position 現職

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亞東醫院 心臟血管內科
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亞東醫院 心導管室

Education 學歷

2000
醫學士
國防醫學院 醫學系

601 | 16:15 - 16:35

Beyond Clinical Benefits: Exploring the Economic Implications of Single-Pill Combination Therapy in Lipid Control

歐凰姿 教授 / 成功大學 臨藥所

This presentation aims to highlight the economic benefit of ezetimibe-statin combination therapy beyond its clinical advantages. With a focus on high-risk patients with atherosclerotic cardiovascular disease (ASCVD), this topic is of great relevance to cardiologists and metabolic specialists. The presentation will be featured with a range of aspects, from guideline changes, the definition of pharmacoeconomics, international literature, toward the application of this approach to healthcare settings in Taiwan.

In recent years, the landscape of pharmacological interventions has expanded beyond the reduction of patients' lipid levels. Modern guidelines now encompass considerations of cost-effectiveness, assessing treatments based on overall patient benefits. Against this backdrop, pharmacoeconomics assumes a pivotal role. Understanding its definition and application is crucial to ensure maximal economic and clinical gains for patients.

Literature across various countries investigating the cost-effectiveness of ezetimibe-statin combination therapy has emerged, showing that this approach holds potential economic benefits in improving lipid control and cardiovascular risk management, ultimately enhancing patients' quality of life and reducing healthcare expenditures.

In Taiwan's healthcare landscape, the utilization of ezetimibe-statin combination therapy is gaining traction. With evolving medical technologies, the opportunity to evaluate the cost-effectiveness of this strategy within our clinical practice is ripe. This approach not only aids patients in managing lipid profiles and cardiovascular risk but also presents advantages to our healthcare system.

In conclusion, when viewed from the perspective of pharmacoeconomics, ezetimibe-statin combination therapy offers benefits that extend beyond clinical outcomes. It has the potential to enhance patient well-being and generate positive economic impact. The development of this therapeutic strategy requires collaborative efforts among guidelines and clinical practice to ensure patients derive maximal benefits and our healthcare system sees positive effects.

歐凰姿 教授
成功大學 臨藥所

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2010/05
Ph.D.,
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PLENARY SESSION 3:
血脂治療的藥物經濟學及大數據分析


劉秉彥
秘書長


林宗賢
副院長


鄭建興
監事


吳懿哲
理事


葉志凡
副秘書長


賀立婷
醫師


譚家惠
助理教授


歐凰姿
教授

16:50 - 17:00 — **Opening Remarks**

Moderator:	林宗憲 副院長 / 高醫附醫 心臟血管內科

PS3-1 **17:00 - 17:20** — **花費負擔與減油效果，如何衡量？ Focus on primary and secondary prevention**

17:20 - 17:30 — **Discussion**

Moderator:	鄭建興 監事 / 台大醫院 神經內科
Speaker:	賀立婷 醫師 / 台大醫院 心臟內科

PS3-2 **17:30 - 17:50** — **膽固醇治療的使用方法跟成本考量：Cholesterol-lowering strategy and economic concerns**

17:50 - 18:00 — **Discussion**

Moderator:	吳懿哲 常務理事 / 馬偕醫院 心臟內科
Speaker:	譚家惠 助理教授 / 中國醫藥大學 醫務管理學系

PS3-3 **18:00 - 18:20** — **Statin無法耐受時的醫療藥物經濟影響：Economic impact using the alternatives for statin intolerance, PCSK9i as an example**

18:20 - 18:30 — **Discussion**

Moderator:	葉志凡 副秘書長 / 台大醫院 心臟內科
Speaker:	歐凰姿 教授 / 成功大學 臨藥所

18:30 - 18:40 — **Closing Remarks**

Moderator:	劉秉彥 秘書長 / 成大醫院 心臟內科

601 | 17:00 - 17:30

花費負擔與減油效果，如何衡量?
Focus on primary and secondary prevention

賀立婷 醫師 / 台大醫院 心臟內科

針對血脂控制的cost effectiveness，重點在於評估藥物的cost，effectivenss，族群baseline risk，得要一個合理的ICER。

Primary prevention和secondary prevention族群baseline risk差距大，則血脂控制的策略也應有不同。

Primary prevention，要多早開始，要用什麼治療?

相對高價但有效的藥物，針對secondary prevention是否合乎經濟效益?

這些都是我們要思考的問題。

賀立婷 醫師
台大醫院 心臟內科

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主治醫師
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博士
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醫學士
國立成功大學 醫學系

造浪必有因，血脂是成因

油選之人

Lipid Matters!

601 | 17:30 - 18:00

膽固醇治療的使用方法跟成本考量：
Cholesterol-lowering strategy and economic concerns

譚家惠 助理教授 / 中國醫藥大學 醫務管理學系

（TO BE PRESENTED）

譚家惠 助理教授

中國醫藥大學 醫務管理學系

Present Position 現職

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Education 學歷

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2002/09 - 2004/07

碩士

國立陽明交通大學

醫務管理研究所

1998/09 - 2002/07

學士

中國醫藥大學 醫務管理學系

601 | 18:00 - 18:30

Statin無法耐受時的醫療藥物經濟影響：Economic impact using the alternatives for statin intolerance, PCSK9i as an example

歐凰姿 教授 / 成功大學 臨藥所

Statin intolerance is a common problem that most clinicians encounter while treating patients taking these drugs. Balancing the symptoms of muscle aches in patients requiring cholesterol-lowering medications with the clinical trial–proven benefits of statins for reducing cardiovascular events in real-world populations with diverse clinical characteristics could be challenging. As estimated, such problem occurs in approximately 9% of statin-treated patients in real-world settings. The newest class of drugs, protein convertase subtilisin/kexin type 9 (PCSK9) inhibitors, has been shown to markedly lower LDL-C levels. Two of these monoclonal antibodies, evolocumab and alirocumab, were approved for use in addition to maximally tolerated statin therapy in adults with familial hypercholesterolemia or atherosclerotic cardiovascular disease who require additional lowering of LDL-C levels. While PCSK9 inhibitors are efficacious, safe, and well-tolerated in real-world patient populations as shown in clinical studies, its high acquisition cost and associated restrict reimbursement policy have limited its wide use in routine practice, especially for patients who are at high risk for cardiovascular events. Careful cost-effective analysis helps more effectively balance intervention costs with savings through proactive interventions and increased quality of life benefits. Against this background, this presentation will summarize and provide up-to-date evidence regarding cost-effectiveness of PCSK9 inhibitors as the alternative for statin intolerance, especially for the patients who would most benefit from using PCSK9 inhibitors.

歐凰姿 教授
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2010/05
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PLENARY SESSION 4:
2023國科會心臟學門與血脂與動脈硬化學會合辦專題：面對AI與ChatGPT來襲，身處造浪中的心臟血管專家們如何應對？


劉秉彥
秘書長


謝宜璋
常務理事


蔡佳醍
召集人


辛致煒
教授


莊柏羣
醫師


許栢超
主任

	14:00 - 14:05	**Opening Remarks** Moderator: 劉秉彥 秘書長 / 成大醫院 心臟內科
PS4-1	14:05 - 14:30	**當設計思考遇上ChatGPT，像極了愛情**
	14:30 - 14:38	**Discussion** Moderator: 劉秉彥 秘書長 / 成大醫院 心臟內科 Speaker: 辛致煒 教授 / 成功大學 推廣中心主任
PS4-2	14:38 - 15:03	**如何使用ChatGPT協助論文書寫及研究計畫書寫**
	15:03 - 15:11	**Discussion** Moderator: 謝宜璋 常務理事 / 林口長庚 心臟內科 Speaker: 莊柏羣 醫師 / 高雄長庚 急診醫學科
PS4-3	15:11 - 15:36	**我如何運用AI工具與ChatGPT在心臟醫學的生活裡？**
	15:36 - 15:44	**Discussion** Moderator: 蔡佳醍 召集人 / 台大醫院 心臟內科 Speaker: 許栢超 主任 / 高醫附醫 心臟內科
	15:44 - 15:50	**Closing Remarks** Moderator: 蔡佳醍 召集人 / 台大醫院 心臟內科
	15:50 - 16:00	**Coffee Break**

602 | 14:05 - 14:38

當設計思考遇上 ChatGPT,像極了愛情

辛致煒教授 / 成功大學 推廣中心主任

在這高速發展的時代,設計思考是我們對人性的呼喚,一種尋找與理解深層需求的過程。這就像一段真摯的愛情,總是試圖深入了解對方,不斷地創新,只為了找到最完美的答案。

ChatGPT 是AI的一部分,卻有著驚人的溫度。它似乎總能聽到那些未被言說的心聲,回應那些沒有被關注的需求。每一次與ChatGPT 的對話,都像是與一位深知你心的知己交流。對心臟血管專家來說,他們面對的不僅僅是冷冰冰的數據和機器,更是那些期待獲得第二次生命機會的病人。在這片希望和絕望交織的領域裡,AI與設計思考的結合,猶如一道曙光,指引著前行的方向。

透過ChatGPT,我們能夠更直接地感受到患者的恐懼、希望和渴望。而設計思考,則讓我們有了工具和方法,去深入這些情感,創建一個不僅治療身體,也撫慰心靈的治療環境。想象一下,當一位患者在夜深人靜時,與ChatGPT 傾訴他的恐懼,而後在專家的指導下,獲得一個量身定制的、滿足他情感和生理需求的治療方案。這不僅僅是技術的進步,更是人與人之間、人與機器之間的真情交流。

結論,我們擁有的不只是技術和方法,更重要的是那份對生命的熱愛和尊重。

當設計思考遇上ChatGPT,這就是一段情感深沈的愛情故事,一次對未來的深情承諾。

辛致煒教授
成功大學 推廣中心主任

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主任
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教務處推廣教育中心
教授
國立成功大學
醫學院 醫學系 寄生蟲學科
教授
國立成功大學
醫學院 微生物暨免疫學研究所

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學士
天主教輔仁大學 生物學系

602 | 14:38 - 15:11

如何使用ChatGPT協助論文書寫及研究計畫書寫

莊柏羣醫師 / 高雄長庚 急診醫學科

在現代科技快速發展的時代，AI工具，特別是ChatGPT，已成為學術研究的重要夥伴。本次演講將分析ChatGPT如何助力於論文寫作的各個階段，從英文校正、撰寫abstract到尋找相關的文獻引用。

首先，我們會深入探討ChatGPT的能力，如何透過其強大的語言模型來協助提高論文的品質，並簡化搜尋與引用的過程。

其次，雖然ChatGPT具有高度的準確性，但它也會出現所謂的"AI hallucination"現象。演講中，我們將討論這種現象的成因及其對論文寫作的潛在影響，並提供策略以減少或避免這些問題。

最後，我們將著重於介紹ChatGPT的最新功能——interpreter。該功能如何革新資料分析，並提供一更直觀的方式來理解、整合以及詮釋資料。

此演講旨在啟發學者們利用AI工具進行學術研究，並對其可能遇到的問題有所預防，從而提高論文的質量和效率。

莊柏羣醫師
高雄長庚 急診醫學科

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2006/09 - 2013/06
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台北醫學大學 醫學系

602 | 15:11 - 15:44

我如何運用AI工具與ChatGPT在心臟醫學的生活裡？

許栢超 主任 / 高醫附醫 心臟內科

近年來，AI技術得到了長足的發展和改進。ChatGPT 的興起則是 AI 技術快速發展和進步的一個例子。ChatGPT 是基於深度學習的自然語言處理技術，現在已經成為人們在聊天機器人和智能客服等領域中常用的工具之一。然而在整個AI的快速發展中, ChatGPT只是其中一種自然生成文本的工具，在我們日常生活中還有相當多非常實用的各式各樣AI工具可以讓我們來好好活用. 藉由這些實用的AI工具，我們可以進一步將其運用在我們的醫學領域上做個人化的運用. 例如使用ChatGPT的AskYourPDF插件可以讓我們讀取醫學pdf文件並作內容摘要整理. 或是我們要使用目前正夯的Claude 2也可以進行更大文本的pdf資料讀取. 另外藉由ChatGPT的code interpreter插件我們可以做更多方面的應用.

由於 AI 對未來各行業都可能帶來潛在的影響，我們應該抱持著 "Run, Don't walk" 的心態，藉由不斷學習新技能和擁抱 AI 的方式來適應這些變化，以提高生產力和效率。並努力實現人與機器之間的平衡。

許栢超 主任
高醫附醫 心臟內科

Present Position 現職

主任
高醫附醫 心臟內科
2008/08 - Present
主治醫師
高醫附醫 心臟血管內科
2021/02 - Present
教授
高雄醫學大學 內科學科

Education 學歷

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碩士
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1996/09 - 2003/06
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高雄醫學大學醫學系

602

PLENARY SESSION 5:
NOVARTIS

劉秉彥
秘書長

Stephen Nicholls
Professor

	16:00 - 16:25	**Initiating combination therapy during ACS hospitalization: Start sooner and treat lower**
PS5-1	16:25 - 16:40	**Panel Discussion & Closing Remarks**

Moderator:	劉秉彥 秘書長 / 成大醫院 心臟內科
Speaker:	Prof. Stephen Nicholls / Victorian Heart Institute, Monash University, Australia.

	16:40 - 16:50	**Dinner Break**

602 | 16:00 - 16:40

Initiating combination therapy during ACS hospitalization: Start sooner and treat lower

Prof. Stephen Nicholls
Victorian Heart Institute, Monash University, Australia.

LDL是導致atherosclerosis的重要成因，因此ASCVD病人積極控制LDL-C並且達到目標值相當重要。然而目前臨床上LDL-C達標率不盡理想，因此許多學者提倡新穎的治療策略，嘗試增加LDL-C達標率，進而改善ASCVD病人預後。

講者在演講中首先會強調ASCVD病人LDL-C達標的重要性，接著講述combination therapy的治療策略可能提升LDL-C達標率，最後闡述若及早在病人發生ACS住院期間開始combination therapy，則能使LDL-C盡早達標，以減少後續ASCVD風險。

Prof. Stephen Nicholls
MBBS, Ph.D.

Present Position 現職

2022 - Present
Program Director,
Monash Victorian Heart Hospital
2020 - Present
Director,
Monash Victorian Heart Institute
2018 - Present
Professor of Cardiology,
Monash University

Education 學歷

2001 - 2004
Ph.D.,
Medical Biochemistry, University of Adelaide
1989 - 1994
MBBS,
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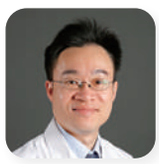
PLENARY SESSION 6:
FH


徐國基
理事


黃金洲
副秘書長


侯嘉殷
理事


江福田
常務監事


黃群耀
部長


蘇大成
教授


李貽恆
名譽理事


常敏之
理事

16:50 - 17:00 **Opening Remarks**

Moderator:	徐國基 理事 / 新光醫院 心臟內科

PS6-1 **17:00 - 17:20** **Update in the diagnosis of familial hypercholesterolemia**

17:20 - 17:30 **Discussion**

Moderator:	黃金洲 副秘書長 / 台北榮總 心臟內科
Speaker:	蘇大成 教授 / 台大醫院 心臟內科

PS6-2 **17:30 - 17:50** **Guidelines recommendations of the management of familial hypercholesterolemia**

17:50 - 18:00 **Discussion**

Moderator:	侯嘉殷 理事 / 馬偕醫院 心臟內科
Speaker:	李貽恒 名譽理事 / 成大醫院 心臟內科

PS6-3 **18:00 - 18:20** **The emerging therapies for homozygous familial hypercholesterolemia**

18:20 - 18:30 **Discussion**

Moderator:	江福田 常務監事 / 輔大醫院 心臟內科
Speaker:	常敏之 理事 / 新光醫院 心臟內科

18:30 - 18:40 **Closing Remarks**

Moderator:	黃群耀 部長 / 北醫附醫 心臟內科

602 | 17:00 - 17:30

Update in the diagnosis of familial hypercholesterolemia

蘇大成 教授 / 台大醫院 心臟內科

Patients of familial hypercholesterolemia (FH) are well-known to increase the risk of premature coronary heart disease (CHD). Previous study had indicated that in many countries, including Taiwan, there were less than 1% FH individuals formally and correctly diagnosed with FH, partly due to the lack of reliable cost-effective genetic testing. However, FH is under-diagnosed and undertreated in Taiwan.

There are more than 1700 mutation sites have been identified worldwide (http://www.ucl.ac.uk/fh), of which 136 mutations have been reported in Han Chinese. Using the high-throughput FH resequencing array detects LDLR, APOB, and PCSK9 with high efficiency and accuracy and identifies disease-causing mutations, five mutations were reported more frequently APOB-R3500W (c. 10579 C>T, 9.6%), LDLR-C308Y (c.986 G>A, 8.3%), LDLR-H562Y (c.1747 C>T, 6.5%), LDLR-A606T (c.1879 G>A, 4.9%), and LDLR-D69N (c. 268 G>A, 4.7%) which together accounted for 34% of mutations found in the Han Chinese population in Taiwan. The custom-designed Agena iPLEX assay for FH genetic screening, also has been validated with high specificity and sensitivity in Taiwan.

In 2016-2017, we have demonstrated the first capture-based next-generation sequencing (NGS) testing for FH to cover the whole LDLR genomic region. Among them, we identified the causative variants in 75% of patients unrelated probands and diagnosed a novel splice site variant c.1186+2T>G in LDLR, and therefore making reliable structural variation detection. This panel can comprehensively detect disease-causing variants in LDLR, APOB, and PCSK9 for FH patients.

From the Taiwan FH registry, 750 index patients were screened using custom-made mass spectrometry, followed by targeted next generation sequencing (NGS) and/or multiplex ligation-dependent probe amplification (MLPA) if found negative. Mutations were detected in 445 patients (59.3%). Among detected mutations, LDLR (n=395), APOB (n=58), and ABCG5 (n=3), and the most common mutations were APOB c.10579 C>T (p.R3527W) (12.6%), LDLR c.986 G>A (p.C329Y) (11.5%), and LDLR c.1747 C>T (p.H583Y) (10.8%). LDLR c.1187-10 G>A (IVS 8-10) and APOB c.10580 G>A (p.R3527Q), which were confirmed using targeted NGS. Even though using above screening and confirmatory strategy, there are only 50%~75% of patients can be diagnosed as FH. However, some studies have recommended using whole-exome sequencing as an expanded and reliable diagnosis tool for patients of negative targeted NGS but with clinical FH.

In conclusion, early diagnosis and management of FH patients can never be over-estimated. Proactive prevention of CHD in FH patients should be focused on raising awareness and saving lives by increasing the rate of early diagnosis and encouraging proactive treatment.

蘇大成 教授
台大醫院 心臟內科

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1990
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1983
學士
國立臺灣大學 醫學院

602 | 17:30 - 18:00

Guidelines recommendations of the management of familial hypercholesterolemia

李貽恒 名譽理事 / 成大醫院 心臟內科

Familial hypercholesterolemia (FH) is an underdiagnosed disease despite its clinical impact on cardiovascular outcome. Family screening is recommended for FH cases. Risk stratification is the first step for management of FH and cardiovascular imaging is helpful to determine the risk. There has been much progress in effective LDL-C-lowering therapies in the past decade. Intensification of LDL-C lowering therapies is necessary to reduce the future cardiovascular risk of FH. However, there are still many challenges in FH management, including poor awareness, underdiagnosis and barriers to newer therapies.

李貽恒 名譽理事
成大醫院 心臟內科

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602 | 18:00 - 18:30

The emerging therapies for homozygous familial hypercholesterolemia

常敏之 理事 / 新光醫院 心臟內科

Familial hypercholesterolemia (FH) is an autosomal codominant genetic disorder of lipoprotein metabolism. Patients can be heterozygous (HeFH) with one mutated allele, homozygous (HoFH) with two identical mutations, or compound heterozygous with different mutations in each allele. HoFH is the more severe form of the disease and is associated with extremely elevated levels of total cholesterol and low - density lipopro - tein cholesterol (LDL - C). These lipid abnormalities are associated with accelerated atherosclerosis and cardiovascular disease (CVD) and an increased risk of cardiac events and early death. The prevalence of HoFH has been estimated to be 1 in 1 million; however, this is likely an underestimation as the disease is substantially underdiagnosed and undertreated. Early diagnosis and treatment are important to reduce CVD events. Aggressive therapy with conventional agents such as statins and ezetimibe produce substantial reductions in LDL - C, but patients rarely reach target goals. Apheresis should be considered in all patients with HoFH, although LDL - C levels rapidly rebound to baseline levels. Three recently introduced novel agents (lomitapide, and evinacumab)—each with a unique therapeutic mechanism and being LDL receptor independent —have increased therapeutic options in this difficult - to - treat population. When added to standard therapy, these agents produce significant additional LDL - C lowering and can potentially improve clinical outcomes.

常敏之 理事
新光醫院 心臟內科

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黃柏勳
理事長


謝敏雄
教授


蘇正煌
醫師


曹承榮
醫師


徐千彝
醫師


鄭浩民
醫師


林肇鋒
醫師


趙子凡
醫師

	13:00 - 13:10	**Opening Remarks** Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科
CEC-1	13:10 - 13:30	**What is the recommended healthy lifestyle for my cardiovascular disease patients**
	13:30 - 13:40	**Discussion** Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科 Speaker: 曹承榮 醫師 / 衛福部豐原醫院 副院長
CEC-2	13:40 - 14:00	**New recommended dyslipidemia management in 2023**
	14:00 - 14:10	**Discussion** Moderator: 謝敏雄 教授 / 萬芳醫院 心臟內科 Speaker: 徐千彝 醫師 / 北醫附醫 心臟內科
CEC-3	14:10 - 14:30	**New development of acute coronary syndrome treatment in 2023**
	14:30 - 14:40	**Discussion** Moderator: 謝敏雄 教授 / 萬芳醫院 心臟內科 Speaker: 林肇鋒 醫師 / 台北馬偕 心臟內科
CEC-4	14:40 - 15:00	**New development of hypertension treatment in 2023**
	15:00 - 15:10	**Discussion** Moderator: 蘇正煌 醫師 / 台北馬偕 心臟內科 Speaker: 鄭浩民 醫師 / 台北榮總 心臟內科
CEC-5	15:10 - 15:30	**New development of stroke prevention for atrial fibrillation in 2023**
	15:30 - 15:40	**Discussion** Moderator: 蘇正煌 醫師 / 台北馬偕 心臟內科 Speaker: 趙子凡 醫師 / 台北榮總 心臟內科

603 | 13:10 - 13:40

What is the recommended healthy lifestyle for my cardiovascular disease patients

曹承榮 醫師 / 衛福部豐原醫院 副院長

(TO BE PRESENTED)

曹承榮 醫師
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台中榮總心臟內科
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台中榮總心臟血管中心
病房團隊副主任
台中榮總心臟血管中心

603 | 13:40 - 14:10

New recommended dyslipidemia management in 2023

徐千彝 醫師 / 北醫附醫 心臟內科

Cardiovascular disease (CVD) is the second leading cause of death in Taiwan. The prevalence of ischemic heart disease continues to rise, highlighting the importance of effective long-term risk factor management. Novel guidelines on lipids provide important new advice on patient management, which should enable more clinicians to efficiently and safely reduce CV risk through lipid modification. These guidelines has been developed for healthcare professionals to facilitate informed communication with individuals about their CV risk and the benefits of adopting and sustaining a healthy lifestyle, and of early modification of their lipid-related CV risk.

Statins have long been the mainstay of treatment for dyslipidaemia. However, the achievement of treatment goals is poor, with one study of high-risk patients on statins suggesting that only 20–26% and 67–77% of individuals achieve target low-density lipoprotein cholesterol (LDL-C) levels below 1.8 or 2.6 mmol/L, respectively. Recent advances in the development of proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors and small interfering ribonucleic acid (siRNA) have changed the landscape of pharmacotherapy for dyslipidaemia. Possible contributing factors include adverse effects and poor daily compliance. PCSK9 inhibitors (evolocumab and alirocumab) and siRNA directed against PCSK9 (inclisiran) provide an opportunity to reach target LDL-C levels using an alternative mechanism of action to statins, with improved compliance due to the potential of long-duration semi-annual dosing. Bempedoic acid is a small molecule that inhibits ATP citrate lyase, an enzyme in the cholesterol synthesis pathway that is upstream of the rate-limiting enzyme HMG CoA reductase. Bempedoic acid is administered orally as a prodrug and is activated by verylong-chain acyl-CoA synthetase-1, an enzyme present in liver cells, but not muscle cells. This has been considered a possible advantage in patients with statin-associated muscle symptoms.

The updated recommendations on dyslipidemia management in 2023 prioritize a personalized, multifaceted approach. By considering individual risk factors and the role of emerging pharmacological therapies, these recommendations aim to optimize cardiovascular outcomes and reduce the burden of cardiovascular diseases on a global scale.

徐千彝 醫師
北醫附醫 心臟內科

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北醫附醫 心臟內科專任
主任
北醫附醫 心臟內科心臟衰竭組
專任助理教授
台北醫學大學

Education 學歷

博士
國立陽明交通大學
臨床醫學研究所
醫學士
國立陽明交通大學

603 | 14:10 - 14:40

New development of acute coronary syndrome treatment in 2023

林肇鋒 醫師 / 台北馬偕 心臟內科

(TO BE PRESENTED)

林肇鋒 醫師
台北馬偕 心臟內科

Present Position 現職

副系主任
馬偕醫學院 醫學系
部定助理教授
馬偕醫學院 醫學系
資深主治醫師
馬偕紀念醫院 心血管中心
心臟內科

Education 學歷

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台北醫學大學
癌症生物學與藥物研發
醫學士
國立陽明交通大學 醫學系

603 | 14:40 - 15:10

New development of hypertension treatment in 2023

鄭浩民 醫師 / 台北榮總 心臟內科

Globally, hypertension is the leading modifiable risk factor for cardiovascular (CV) disease and all-cause mortality. Despite the positive correlations between blood pressure (BP) levels and subsequent cardiovascular (CV) events, since BP levels as low as 100/60 mmHg have been reported in numerous epidemiological studies, the diagnostic criteria of hypertension and BP thresholds and targets of antihypertensive therapy have largely remained at 140/90 mmHg over the past 30 years. Both the SPRINT and STEP trials (comprising over 8,500 Caucasian/African and Chinese participants, respectively) provided evidence to challenge the 140/90mmHg dogma. Another hypertension management dogma is the reliance on office (or clinic) blood pressure measurements. Despite the fact that standardized office BP measurements have been widely recommended and adopted in large-scale CV outcome trials, office BP measurements have never been optimal in actual clinical practice. Home BP monitoring (HBPM) is simple, more likely to be free of environmental and/or emotional stress, capable of documenting long-term BP variations, of good reproducibility and reliability, and more correlated with hypertension-mediated organ damage (HMOD) and CV events than routine office BP measurements. In the 2022 Taiwan Hypertension Guidelines of the Taiwan Society of Cardiology (TSOC) and the Taiwan Hypertension Society (THS), we recommend the definition of hypertension as 130/80 mmHg and a universal BP target of 130/80 mmHg, based on standardized HBPM obtained using the 722 protocol. The 722 protocol refers to duplicate blood pressure readings taken on each occasion ("2"), twice daily ("2"), for seven days ("7"). A series of flowcharts encompassing assessment, adjustment, and HBPM-guided hypertension management are provided to facilitate implementation of the guidelines. Other important messages include the following: 1) Lifestyle modification, summarized by the mnemonic S-ABCDE, should be applied to people with elevated BP and hypertensive patients to reduce life-time BP burden; 2) all 5 major antihypertensive drugs (angiotensin-converting enzyme inhibitors [A], angiotensin receptor blockers [A], -blockers [B], calcium-channel blockers [C], and thiazide diuretics [D]) 5) Renal denervation can be considered as an alternative strategy for lowering blood pressure following a thorough clinical and imaging evaluation.

鄭浩民 醫師
台北榮總 心臟內科

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Director
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Education 學歷

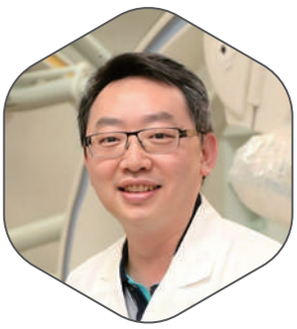
Ph.D.,
Faculty of Health Science, The University of Adelaide, Australia.
M.D.,
Faculty of Medicine, National Yang Ming Chiao Tung University, Taipei, Taiwan.

603 | 15:10 - 15:40

New development of stroke prevention for atrial fibrillation in 2023

趙子凡 醫師 / 台北榮總 心臟內科

Patients with atrial fibrillation (AF) were associated with an increased risk of ischemic stroke, which could be effectively prevented with oral anticoagulants (OACs). The introduction of non-vitamin K antagonist OACs (NOACs) has changed the landscape for stroke prevention in AF by increasing the prescriptions rates of OACs and improved clinical outcomes of AF patients. The structured clinical pathway, such as ABC pathway, has been proposed and validated to improve patient care in Asia. Also, results of the community-based and government-endorsed AF screening project in Taiwan have been published which demonstrated that incorporation of AF screening into the preexistent adult health check programs through co-operations with the government was feasible. Furthermore, more data about the use of NOACs in AF patients with end stage renal disease undergoing hemodialysis were available. The Non–vitamin K antagonist Oral anticoagulants in patients with Atrial High rate episodes (NOAH–AFNET 6) trial also provided useful data to guide the stroke prevention strategy in patients with atrial high rate episodes detected by the atrial lead of the pacemaker which has not been well studied before.



趙子凡 醫師
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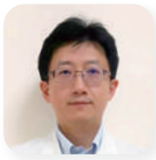
PLENARY SESSION 7:
BAYER



黃柏勳
理事長

謝敏雄
教授

PS7-1	16:00 - 16:25	**Case-Based Discussion: Escalate Protection in Chronic Coronary Syndrome (CCS) – What Patients can Benefit from DPI?**
	16:25 - 16:40	**Panel Discussion & Closing Remarks**
		Moderator: **黃柏勳 理事長** / 台北榮總 心臟內科 Speaker: **謝敏雄 教授** / 萬芳醫院 心臟內科
	16:40 - 16:50	**Dinner Break**

603 | 16:00 - 16:25

Case-Based Discussion: Escalate Protection in Chronic Coronary Syndrome (CCS) – What Patients can Benefit from DPI?

謝敏雄 教授 / 萬芳醫院 心臟內科

冠狀動脈疾病患者常同時伴隨著其他動脈相關疾病，包括周邊動脈或腦血管疾病等，此類高風險患者死亡率及發生心血管事件的風險將顯著提升，在臨床上的治療一直存在相當的挑戰。過往的治療多數以雙抗血小板藥物為主，例如aspirin加clopidogrel，大型研究證實無法降低心血管事件，而出血也沒有顯著增加；另外aspirin加ticagrelor的人體試驗雖然可以降低心血管事件，但出血明顯增加許多。近期以rivaroxaban加上　Aspirin為組合之新型治療方式 Dual Pathway Inhibition (DPI)，相較於單獨使用 Aspirin，DPI 在治療冠狀動脈疾病上可以顯著減少重大心血管不良事件風險及心因性死亡率，同時也可以顯著降低中風及周邊血管病變，效果明顯比雙抗血小板藥物為佳，因此變成高風險缺血性血管疾病治療主流，同時也在2021年7月取得健保正式給付。本次討論將透過實際案例分享及實證回顧，探討 DPI 能為那些高風險患者帶來益處。

謝敏雄 教授
萬芳醫院 心臟內科

Present Position 現職

2022/08 - Present
主任
台北醫學大學 萬芳醫院 心血管中心

2022/08 - Present
副主任
台北心臟醫學中心

2018/08 - Present
教授
台北醫學大學 醫學系

Education 學歷

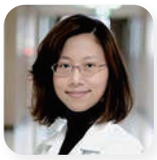
1984/09 - 1991/06
醫學士
高雄醫學院 醫學系

心血管疾病防治網繼續教育課程 (II)


黃柏勳
理事長


張獻元
醫師


吳承學
醫師


張瑋婷
醫師

CEC-6 **16:50 - 17:10** **New development of peripheral artery disease treatment in 2023**

17:10 - 17:20 **Discussions**

Moderator:	張獻元 醫師 / 成大醫院 心臟內科
Speaker:	吳承學 醫師 / 台北榮總 心臟內科

CEC-7 **17:20 - 17:40** **New development of diabetes treatment in 2023**

Moderator:	張獻元 醫師 / 成大醫院 心臟內科
Speaker:	張瑋婷 醫師 / 奇美醫院 心臟內科

16:40 - 16:50 **Discussion & Closing**

Moderator:	黃柏勳 理事長 / 台北榮總 心臟內科

603 | 16:50 - 17:20

New development of peripheral artery disease treatment in 2023

吳承學 醫師 / 台北榮總 心臟內科

(TO BE PRESENTED)

吳承學 醫師
台北榮總 心臟內科

Present Position 現職

主任
台北榮總 重症醫學部加護內科
主治醫師
台北榮總 內科部 心臟內科
助理教授
國立陽明交通大學 內科學科

Education 學歷

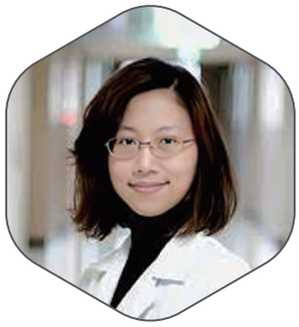
醫學士
國立陽明交通大學 醫學士

603 | 17:20 - 17:50

New development of diabetes treatment in 2023

張瑋婷 醫師 / 奇美醫院 心臟內科

Notable updates to the 2023 Standards of Care in Diabetes highlight that first, weight loss of up to 15% for individuals with diabetes is recommended. Second, hypertension is now defined as a systolic blood pressure ≥130 mmHg or a diastolic blood pressure ≥80 mmHg. SGLT2 inhibitors are now recommended for use in individuals with both preserved and reduced heart failure ejection fraction. Finerenone, a novel non-steroidal MRA t in managing diabetes and chronic kidney disease with albuminuria should be considered. The Standards now suggest lower LDL goals for high-risk individuals. Also, an expanded section on "Nonalcoholic Fatty Liver Disease" (NAFLD) provides comprehensive information on its relation to diabetes. Updates in vaccination for people with diabetes and considerations related to diabetes and COVID-19 are also incorporated in the 2023 Standards of Care. In addition, the emerging clinical trials will shed light on high-dose oral semaglutide and retatrutide, a GIP/GLP-1/glucagon receptor triple agonist. Intriguingly, the artificial pancreas with beta cell replacement therapies will be a particular focus on upcoming innovations in the diabetes world. These changes collectively reinforce the commitment to advancing diabetes care and optimizing patient outcomes.



張瑋婷 醫師
奇美醫院 心臟內科

Present Position 現職

2023/08 - Present
Associate Professor,
Department of Clinical Medicine, National Sun Yat-sen University, Taiwan.

2020/08 - Present
Associate Professor,
Department of Biotechnology Southern Taiwan University of Science and Technology, Taiwan.

Education 學歷

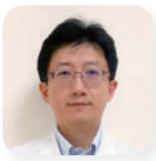
2019/08 - 2023/06
Ph.D.,
Graduate Institute of Clinical Medicine, National Cheng Kung University, Taiwan.

DAY 2

September 17th, 2023 | Sunday

PROGRAM

The 22nd Taipei International Vascular Biology Symposium


黃柏勳
理事長


劉秉彥
秘書長


林幸榮
名譽理事


陳肇文
名譽理事


殷偉賢
名譽理事


洪傳岳
名譽理事


James K. Liao
Professor


Ryuichi Morishita
Professor


Hiroshi Yoshida
Professor


蘇冠賓
醫師

09:00 - 09:10

Opening Remarks

Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科

VBS-1 09:10 - 09:40

Role of Endothelial Regulator of G Protein Signaling 5 in Postnatal Angiogenesis

09:40 - 09:50

Discussion

Moderator: 劉秉彥 秘書長 / 成大醫院 心臟內科
Speaker: **Prof. James K. Liao**
Robert & Irene Flinn Professor Chair,
Department of Medicine University of Arizona,
College of Medicine
Tucson Banner University Medical Center,
USA.
(AstraZeneca Sponsorship)

VBS-2 09:50 - 10:20

Challenge to Medical Innovation from Academia

10:20 - 10:30

Discussion

Moderator: 林幸榮 名譽理事 / 台北榮總 心臟內科
Speaker: **Prof. Ryuichi Morishita /**
Professor of Department of Clinical Gene Therapy,
Center of Medical Innovation and
Translational Research School of Medicine,
Osaka University,
Japan.

The 22nd
Taipei International Vascular Biology Symposium

	10:30 - 10:45	**Poster Session（Poster Area）**
VBS-3	10:45 - 11:15	**Insights into clinical practice of lipid-lowering therapy: Messages from Japan Atherosclerosis Society (JAS) guidelines for prevention of atherosclerotic cardiovascular diseases 2022**
	11:15 - 11:25	**Discussion**

Moderator:	陳肇文 名譽理事 / 北醫附醫 心臟內科
Speaker:	Prof. Hiroshi Yoshida / Professor, The Jikei University Kashiwa Hospital Executive member of Japan Atherosclerosis Society, Japan.

VBS-4	11:25 - 11:55	**The interplay between eicosapentaenoic acid EPA, inflammation & depression**
	11:55 - 12:05	**Discussion**

Moderator:	殷偉賢 名譽理事 / 振興醫院 心臟內科
Speaker:	蘇冠賓 醫師 / 安南醫院 研究副院長

	12:05 - 12:15	**Closing Remarks**

Moderator:	洪傳岳 名譽理事 / 萬芳醫院 心臟內科

	12:15 - 12:30	**Lunch Break**

601 | 09:10 - 09:50

Role of Endothelial Regulator of G Protein Signaling 5 in Postnatal Angiogenesis

Prof. James K. Liao /
University of Arizona, College of Medicine

Background: Regulator of G protein signaling (RGS)-5 belongs to the R4/B subfamily of RGS proteins. It is a highly upregulated gene after vascular injury, and was initially found to be a potent negative regulator of Gαq and GαI. Although RGS5 is highly abundant in pericytes, it is also expressed in vascular endothelial cells. This makes RGS5, a potentially important signaling molecule in mediating vascular function, and in particular, angiogenesis.

Methods and Results: Conditional Rgs5flox/flox mice were generated using Cre-loxP technology that targeted exon 1 of Rgs5 gene. Global Rgs5 KO (Rgs5–/–) mice were generated by crossing PGK-Cre deleter mice with Rgs5flox/flox mice. Endothelial Rgs5-deficient (EC-Rgs5–/–) mice were generated using inducible endothelial-specific VE-cadherin-Cre recombinase mice (cdh5-Cre ERT2) crossed with conditional Rgs5flox/flox mice and induction with tamoxifen. Following hind limb ischemia, both Rgs5–/– and EC-Rgs5–/– mice showed reduced blood flow recovery, decreased capillary density, greater functional impairment, and higher rates of autoamputation of the affected limb. Defective angiogenesis and endothelial migration were confirmed with ex-vivo and in-vitro angiogenesis assays. Furthermore, the loss of endothelial RGS5 leads to decreased vascular endothelial growth factor receptor (VEGFR)-2 phosphorylation and its downstream signaling effectors. The mechanism is due, in part, to increased SHP-1 phosphatase activity, which inhibits VEGFR2 signaling by dephosphorylation of VEGFR2 at Tyr1175. This correlated with increased apoptosis and decreased viability of Rgs5-deficient endothelial cells.

Conclusions: Our findings suggest that RGS5 is a critical regulator of VEGF signaling and postnatal angiogenesis through its modulation of SHP-1 phosphatase activity. The impact of RGS5 in controlling neovascularization could be quite substantial as this could be an important therapeutic modulator for vascular occlusive disease such as coronary and peripheral artery disease.

Prof. James K. Liao
M.D., FACP, FACC

Present Position 現職

2023/01 - Present
Chair,
University of Arizona, College of Medicine
2020 - Present
Professor,
University of Arizona, College of Medicine.

Education 學歷

1985
M.D.,
University of California San Francisco.
1981
B.S.,
Physical Chemistry, Magna cum laude, University of California Los Angeles.

601 | 09:50 - 10:30

Challenge to Medical Innovation from Academia

Prof. Ryuichi Morishita /
Department of Clinical Gene Therapy, Osaka University Medical School.

Our group has tried to develop medical innovation based Academia research. One of our trials is to develop plasmid DNA-based gene therapy. To promote angiogenesis in patients with critical limb ischemia (CLI) caused by peripheral artery disease, we focused on hepatocyte growth factor (HGF) as pro-angiogenic factors. After the success of phase III clinical trial, HGF gene therapy drug, Collategene, has been conditionally approved by PMDA in Japan. In 2022, Collategene was submitted to formal approval in Japan as the gene therapy drug. In addition, we recently focused on the therapeutic vaccination which has extended its scope from infectious diseases to chronic diseases based on plasmid DNA technology. Angiotensin (Ang) II vaccine for hypertension successfully attenuated the high blood pressure in animal models (PLoS One 2013, Sci Rep 2017, Stroke 2017). Increasing the effectiveness of drug adherence interventions may have a great impact on the health of the population, because approximately 50% may not take medications. This poor adherence to medication leads to increased morbidity and death. Phase I/II clinical trial demonstrated good safety profile and the production of antibody against Ang II. In next step, we will start phase IIb study to test the anti-hypertensive efficacy.

We also developed early detection of dementia using AI-based eye-tracking technology. Responding to the rapid rise in the number of dementia cases is becoming increasingly urgent. A great deal of medical evidence indicates that early diagnosis and timely intervention lead to beneficial outcomes. A diagnostic method for the easy and accurate detection of mild symptoms of dementia is necessary to provide early intervention. Thus, we have developed a novel cognitive assessment method that uses eye-tracking technology. The method involves tracking and recording the subject' s gaze as they watch a series of task movies of about three minutes' duration and using the eye-tracking data to quantify the subject' s cognitive function. The results correlate well with scores obtained using a conventional cognitive test (MMSE). This easy-to-administer cognitive assessment application for smart devices provides effective screening for early symptoms of dementia. This eye-tracking device to detect dementia will be launched in Japan as medical device, soon. In this lecture, I will focus medical innovation based on Academia-driven technology.

Prof. Ryuichi Morishita
M.D., Ph.D.

Present Position 現職

2003/03 - Present
Professor,
Department of Clinical Gene Therapy, Osaka University Medical School. (Donated by Dai-ichi Pharmaceutical)
2000/01 - Present
Visiting Professor,
The University of Hong Kong.

Education 學歷

1987/04 - 1991/03
Ph.D.,
Osaka University Medical School, Osaka, Japan.
1981/04 - 1987/03
M.D.,
Osaka University Medical School, Osaka, Japan.

601 | 10:45 - 11:25

Insights into clinical practice of lipid-lowering therapy: Messages from Japan Atherosclerosis Society (JAS) guidelines for prevention of atherosclerotic cardiovascular diseases 2022

Prof. Hiroshi Yoshida / The Jikei University Kashiwa Hospital

In Japan, cardiovascular deaths from atherosclerotic cardiovascular disease (ASCVD), especially cardiac diseases including coronary artery disease (CAD) such as myocardial infarction and angina pectoris, and cerebrovascular diseases such as cerebral infarction account for about 23% of all deaths. Therefore, we should focus on the prevention and treatment of ASCVD and these actions will become increasingly important in the future. Since the first publication of the Guidelines for the Treatment of Hyperlipidemia in 1997, the Japan Atherosclerosis Society (JAS) has revised the guidelines every five years. Last year, almost at the same time in Taiwan guidelines, JAS reported JAS guidelines for the prevention of atherosclerotic cardiovascular diseases 2022, and it will be published in 2023. The main revisions in this 2022 edition are including a cut-off value for non-fasting triglyceride (TG) for the dyslipidemia diagnosis and ASCVD risk control, a risk score derived from Hisayama study to assess the absolute risk of ASCVD for establishing lipid management targets, the strict target less than 100 mg/dL for low-density lipoprotein (LDL) cholesterol (LDL-C) management in patients with diabetes with peripheral arterial disease, microangiopathy complications, or smoking, and also the stringent target less than 70 mg/dL for LDL-C control in secondary prevention patients with acute coronary syndrome, familial hypercholesterolemia, diabetes and complications of CAD and atherothrombotic cerebral infarction.

A meta-analysis by the CTT (cholesterol treatment trialists) Collaboration of large-scale clinical trials conducted overseas using statins showed that the incidence rate of ASCVD decreased in proportion to the amount of reduction in LDL-C levels regardless of the individual's absolute risk, history of CAD and LDL-C levels prior to treatment initiation. In primary prevention, LDL-C control is "the lower, the better" in preventing cardiovascular events in high-risk patients as reported previously. In secondary prevention, REAL-CAD study with pitavastain in Japan showed a significant ASCVD suppression of 19% in the high-dose group compared to the low-dose group.

Here, I would talk about the JAS guidelines 2022 and some updated evidence of clinical studies for LDL-C lowering and ASCVD risk.

Prof. Hiroshi Yoshida
M.D., Ph.D., FACP

Present Position 現職

Professor,
Department of Laboratory Medicine, The Jikei University School of Medicine.

601 | 11:25 - 12:05

The interplay between eicosapentaenoic acid EPA, inflammation & depression

蘇冠賓 醫師 / 安南醫院 研究副院長

The increasing global burden calls for the development of novel approaches to tackle unmet needs in prevention and treatment of depression underlying biological, psychological and social dysregulations. Depressed patients with chronic low-grade inflammation might be classified as a subgroup of major depressive disorder (MDD); therefore, looking for antidepressant therapies from anti-inflammatory pathways could improve treatment effectiveness for this subgroup of patients. Omega-3 (or n-3) polyunsaturated fatty acids (PUFAs) are anti-inflammatory both in peripheral organs and central nervous systems and have clinically applied in the treatment and prevention of depression, cardiovascular diseases, dyslipidaemia, diabetes and arthritis. Anthropological studies suggest that human beings evolved to a modern diet with less than one-tenth of omega-3 to omega-6 PUFAs intake ratio, which leads to a constitutional bias toward chronic systemic inflammatory status to explain dramatically increasing of depression and chronic medical illnesses in modern world. The presentation is to provide our recent clinical and pre-clinical studies and an overview about the role of inflammation in “ mind-body” comorbidity and present anti-inflammatory mechanisms by which n-3 PUFAs, especially eicosapentaenoic acid (EPA), may orchestrate the molecular and cellular functions and facilitate the therapeutic pathways in chronic medical illnesses and depression.

蘇冠賓 醫師
安南醫院 研究副院長

Present Position 現職

Professor and Deputy Superintendent,
An-Nan Hospital,
China Medical University,
Tainan, Taiwan.
PI,
Mind-Body Interface Research Center (MBI-Lab),
China Medical University Hospital, Taichung, Taiwan.

Education 學歷

Ph.D.,
Institute of Psychiatry,
King’ s College London, UK.
M.D.,
Kaohsiung Medical College,
Kaohsiung, Taiwan.

LUNCHEON SYMPOSIUM 1
Viatris

謝宜璋
常務理事

王奇彥
醫師

12:30 - 12:35 | **Opening Remarks**

Moderator: 謝宜璋 常務理事 / 林口長庚 心臟內科

LS1-1 **12:35 - 13:05** | **Lipid lowering: Past, Present and Future**

13:05 - 13:10 | **Panel Discussion & Closing Remarks**

Moderator: 謝宜璋 常務理事 / 林口長庚 心臟內科
Speaker: 王奇彥 醫師 / 台中榮總 心臟內科

601 | 12:35 - 13:10

Lipid lowering: Past, Present and Future

王奇彥 醫師 / 台中榮總 心臟內科

Cardiovascular disease, including atherosclerotic cardiovascular disease (ASCVD), is one of the major leading causes of death in Taiwan. The causal link of LDL-C and ASCVD was further proved in many clinical trials showing that intensive reduction of LDL-C is an effective therapy to attenuate the progression of coronary atherosclerosis and improve CV outcomes. Recently, Taiwan Society of Lipids and Atherosclerosis associated with various Taiwanese societies to publish and update the lipid guidelines for high risk patients.

In high risk patients, coronary artery disease (CAD) / acute coronary syndrome (ACS), peripheral artery disease (PAD) and ischemic stroke based on the scientific evidence from recently published clinical trials recommended LDL target-C less than 70mg/dL would have better outcomes. Statin played a big role in lipid-lowering strategy.

王奇彥 醫師
台中榮總 心臟內科

Present Position 現職

主治醫師
台中榮總 心臟內科

Education 學歷

醫學士
長庚大學 醫學系

LUNCHEON SYMPOSIUM 2
Sanofi

翁國昌
教授

林柏霖
醫師

13:10 - 13:15 | **Opening Remarks**

Moderator: 翁國昌 教授 / 中山附醫 心臟內科

LS2-1 **13:15 - 13:40** | **Illuminating benefit of PCSK9i in CAD patients with dyslipidemia**

13:40 - 13:45 | **Panel Discussion**

Moderator: 翁國昌 教授 / 中山附醫 心臟內科
Speaker: 林柏霖 醫師 / 新竹馬偕 心臟內科

13:45 - 13:50 | **Closing Remarks**

Moderator: 翁國昌 教授 / 中山附醫 心臟內科

13:50 - 14:00 | **Coffee Break**

601 | 13:15 - 13:45

Illuminating benefit of PCSK9i in CAD patients with dyslipidemia

林柏霖 醫師 / 新竹馬偕 心臟內科

去年中華民國血脂及動脈硬化學會(TSLA)發表新的血脂治療指引，將在此演講中介紹指引中強調不同族群的更新建議治療LDL-C標準，並搭配現今臨床上治療選擇以及LDL-C與斑塊穩定的關聯性做深入探討。使用PCSK9i對冠心病（CAD）病患伴隨脂質異常之治療，具有獨特的益處。這種治療方法能夠針對高風險的CAD病患，有效地降低LDL-C，減少心血管事件的風險。PCSK9i為CAD病患開啟了一條希望之路，為臨床實踐提供了寶貴的選項，同時也促進了對於脂質治療領域的不斷探索和進步。

林柏霖 醫師
新竹馬偕 心臟內科

Present Position 現職

資深主治醫師
新竹馬偕紀念醫院 心臟內科

Education 學歷

博士
國立陽明交通大學
生物科技研究所

碩士
中原大學 生物醫學工程研究所

醫學士
中山醫學大學 醫學系

油選之人的歸宿—民主的體重管理


褚柏顯
教授


陳柏升
理事


王朝永
副秘書長


王宇澄
監事


吳家棟
醫師


李國鼎
主任


莊海華
醫師

14:00 - 14:05 **Opening Remarks**

Moderator:	褚柏顯 教授 / 林口長庚 心臟內科

WM-1 **14:05 - 14:25** **肥胖與油脂的關係-從肥胖到血管和油脂控制**

14:25 - 14:30 **Discussion**

Moderator:	褚柏顯 教授 / 林口長庚 心臟內科
Speaker:	吳家棟 醫師 / 林口長庚 心臟內科

WM-2 **14:30 - 14:50** **減重手術對體重和代謝的控制-智慧選擇 精準治療**

14:50 - 14:55 **Discussion**

Moderator:	陳柏升 理事 / 成大醫院 心臟內科
Speaker:	李國鼎 主任 / 成大醫院 一般外科

WM-3 **14:55 - 15:15** **如何整合體重控制的專家團隊-打贏體重 贏回健康**

15:15 - 15:20 **Discussion**

Moderator:	王朝永 副秘書長 / 林口長庚 心臟內科
Speaker:	莊海華 醫師 / 林口長庚 家醫科

15:20 - 15:30 **Closing Remarks**

Moderator:	王宇澄 監事 / 亞大附醫 心臟內科

601 | 14:05 - 14:30

肥胖與油脂的關係-從肥胖到血管和油脂控制

吳家棟 醫師 / 林口長庚 心臟內科

肥胖是現代社會的嚴重問題，與心臟疾病有密切的關聯。肥胖常與高血脂、高血壓等狀況並存，這些都是動脈粥狀硬化的重要風險因素。

首先，飲食中過多的油脂（特別是飽和脂肪和反式脂肪）會導致血中膽固醇和三酸甘油脂水平升高。這不僅增加心臟負擔，還會導致脂質在血管壁上積累，形成斑塊，進而增加血管硬化的風險。

其次，肥胖本身會引發一系列代謝異常，包括胰島素抗性、高血糖等，這些也會加速血管的硬化過程。當血管變得僵硬和狹窄時，心臟需要用更大的力量來推動血液，這就增加了心臟疾病的風險。

再者，肥胖會引發慢性炎症反應，釋放出各種炎症因子和自由基，這些物質會直接傷害血管內皮，加劇血管硬化的進程。

總之，肥胖不僅透過影響血脂水平，而且透過多種機制與血管硬化有著直接的關聯。因此，肥胖的患者應改變不良的生活和飲食習慣，括減少油脂的攝取，增加運動，並進行必要的藥物治療。

吳家棟 醫師
林口長庚 心臟內科

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2023/07 - Present
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2022/07 - Present
Vice President
Medical Education Committee, Internal medicine, Chang Gung Memorial Hospital, Linkou.

2005/08 - Present
Attending Physician
Cardiology, Chang Gung Memorial Hospital, Linkou.

Education 學歷

1989/06
M.D.,
Chang-Gung University, Department of medicine, Taoyuan, Taiwan.

60 | 14:30 - 14:55

減重手術對體重和代謝的控制–智慧選擇 精準治療

李國鼎 主任 / 成大醫院 一般外科

(TO BE PRESENTED)

李國鼎 主任
成大醫院 一般外科

Present Position 現職

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成大醫院 外科部 乳房外科
主治醫師
成大醫院 外科部

Education 學歷

醫學士
長庚大學 醫學系

601 | 14:55 - 15:15

如何整合體重控制的專家團隊—打贏體重 贏回健康

莊海華 醫師 / 林口長庚 家醫科

在當前社會，肥胖已經不僅是個人的健康議題，而是成為了一個全社會需共同面對的公共衛生問題。根據衛生署2010年的報告，雖然台灣的肥胖問題並不像西方國家那般嚴重，但隨著飲食習慣的日益西化，肥胖率也逐年攀升。肥胖不僅導致相關疾病的發生率提高，其相關的併發症也非常多元，涉及多個器官系統和身體功能。因此，探討如何建立和整合專業的體重控制團隊，以幫助人們打贏減重的戰役，贏回健康，成為一個極具意義的議題。

在此背景下，我們會探討如何整合專家團隊來進行體重控制—不僅僅是贏得減重的勝利，更是贏回健康的起點。此演講將著重於以下幾個方面：

首先，我們會介紹肥胖的現狀和與之相關的多元併發症。肥胖不僅是一個美學問題，它更是一個重大的健康危機，涉及多種慢性疾病和癌症的風險。

其次，我們會深入剖析減重手術（bariatric surgery）這一重要的治療選項。這種手術已被證明為顯著肥胖病患提供了一個重要的治療選擇，具有小傷口、快速恢復和短暫住院時間的優點。

再次，我們會探討如何建立一支多學科的專家團隊來進行全人的照護。這樣的團隊會包含醫師、護士、社工人員、營養師和復健師等多方面的專業人士，他們會共同努力來幫助病患實現持久的健康改善。

最後，我們會展望未來，探討先進的醫療設備和技術如何助力體重控制。我們會特別介紹一些創新的技術，提供更為精準和靈活的手術操作，減少併發症的風險和改善手術效果。

通過此次演講，我們希望能夠提供一個全面和多元化的視角來看待體重控制的問題，並提出一套綜合的方案來幫助病患戰勝肥胖，迎接一個更健康、更充實的生活。

莊海華 醫師
林口長庚 家醫科

Present Position 現職

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副主任
長庚醫院
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工業工程與管理
醫學士
長庚大學醫學系

精準營養於心臟血管代謝疾病防治之運用: 精心防治飲食


林維文
監事

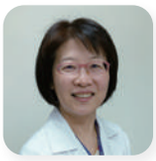

潘文涵
理事


章樂綺
理事


蔡一賢
理事


洪思群
部長


姜廣茂
博士


陳珮蓉
主任

09:00 - 09:10 **Opening Remarks**

Moderator: 林維文 監事 / 台中榮總 心臟內科

TD-1 09:10 - 09:40 **Precision renal and cardiovascular nutrition and gut microbiota**

09:40 - 09:50 **Discussion**

Moderator: 林維文 監事 / 台中榮總 心臟內科
Speaker: 洪思群 部長 / 台北慈濟 內科

TD-2 09:50 - 10:20 **Using polygenetic risk score to identify diet associated high CVMD risk individuals**

10:20 - 10:30 **Discussion**

Moderator: 潘文涵 理事 / 中研院生物醫學研究所
Speaker: 姜廣茂 博士 / 中研院生物醫學研究

10:30 - 10:45 **Poster Session（Poster Area)**

TD-3 10:45 - 11:15 **Using nutritional biochemistry and food frequency questionnaire to identify individual dietary and nutritional problems associated with CVMD**

11:15 - 11:25 **Discussion**

Moderator: 章樂綺 理事 / 中華民國血脂及動脈硬化學會
Speaker: 潘文涵 理事 / 中研院生物醫學研究所所

TD-4 11:25 - 11:55 **Precision dietetics**

11:55 - 12:15 **Discussion and Closing**

Moderator: 蔡一賢 理事 / 馬偕醫院 營養醫學中心
Speaker: 陳珮蓉 主任 / 台大醫院 營養室

12:15 - 12:30 **Lunch Break**

602 | 09:10 - 09:50

Precision renal and cardiovascular nutrition and gut microbiota

洪思群 部長 / 台北慈濟 內科

Cardiovascular disease (CVD) is prevalent and is associated with poor prognosis in patients with chronic kidney disease (CKD). Traditional risk factors for the general population, such as diabetes mellitus, hypertension, and dyslipidemia, are more common in patients with CKD but cannot fully explain the increased risk of CVD in this population. Accumulating data suggest that the uremic milieu itself plays a critical role in the development and progression of CVD. CKD markedly alters the gut microbiota, with overgrowth of bacteria that produce uremic toxins. Indoxyl sulfate is among the most representative gut - derived uremic toxins and has been frequently implicated as a contributor to the pathogenesis of CVD in CKD. Indoxyl sulfate is converted from indole, a gut bacterial metabolite of dietary tryptophan, by CYP2E1 and SULT1A1 in the liver. The majority of studies have assessed indoxyl sulfate toxicity in cultured cells and animal models. However, human data have been conflicting with regard to the association between indoxyl sulfate and CVD risk. Moreover, the benefit of using orally administered adsorbents to reduce indoxyl sulfate levels in unselected CKD patients was not supported by the results from recent large randomized controlled trials. We therefore established an oral tryptophan loading test (TLT) by using a fixed loading dose of tryptophan to simulate dietary tryptophan consumption. The indoxyl sulfate-producing phenotype identified by the TLT may serve as a CVD risk biomarker in CKD patients. High indoxyl sulfate producers are likely to be at a greater risk of CVD and may be more likely to respond to adsorbent therapy. In addition, the TLT may serve as a personalized dietary guidance for patients with CKD. To decrease the CVD risk, high indoxyl sulfate producers should avoid consuming foods that contain elevated levels of tryptophan. To simplify the TLT, a prediction model will be constructed based on the individual producing capacity of indoxyl sulfate as contributed by gut microbiota and liver enzymes. This will be a breakthrough in the field of precision medicine for the nutritional management in CKD.

洪思群 部長
台北慈濟 內科

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台北慈濟醫院 腎臟內科
教授
慈濟大學醫學系 內科學科

Education 學歷

醫學士
台北醫學大學 醫學系

602 | 09:50 - 10:30

Using Polygenetic risk score to identify diet associated high CVMD risk individuals

姜廣茂 博士 / 中研院生物醫學研究所

Background: Obesity has become a major global public health concern, recognized as an independent risk factor for cardiovascular disease. The rising prevalence of obesity, particularly in Taiwan, underscores the need for proactive measures. Genetic factors play a crucial role in obesity development, emphasizing the potential for personalized risk prediction. Polygenic risk scores (PRS) offer a promising avenue for predicting clinical outcomes, yet existing studies on obesity-related genetic markers primarily focus on Western populations, limiting their relevance for Asians and Chinese. Furthermore, gender-specific influences on obesity-related genetic markers require examination.

Methods: In this investigation, we curated 6,056 obesity-related single nucleotide polymorphisms (SNPs) from 284 sources. Leveraging biological data from the Taiwan Biobank encompassing 68,960 Chinese individuals (20,693 males and 46,158 females), we identified 191 male-specific and 378 female-specific SNPs. After culling SNPs with high linkage disequilibrium (R2 > 0.8) and lacking statistical significance (p-value > 0.01) in the Chinese population, these SNPs were integrated into gender-specific polygenic risk scores (PRS). An independent validation set comprising 27,701 participants (13,806 males and 13,895 females) was employed to verify the robustness of the PRS.

Results: Stratified into deciles, the highest PRS tier exhibited significant correlations with obesity (BMI $\geq$ 24) for both males (OR = 4.35, $p < 0.0001$) and females (OR = 5.22, $p < 0.0001$). For morbid obesity (BMI $\geq$ 35), the OR surged to 14.69 ($p < 0.0001$) in males and 26.04 ($p < 0.0001$) in females. In the independent validation set, robust confirmation emerged for PRS-obesity associations, yielding ORs of 2.26 ($p < 0.0001$) in males and 2.5 ($p < 0.0001$) in females for obesity. Corresponding ORs for severe obesity were 2.86 ($p = 0.0048$) in males and 5.29 ($p = 0.0007$) in females.

Conclusion: This study introduces and validates gender-specific PRS for predicting obesity risk in Chinese males and females. These risk scores hold promise for early identification.

姜廣茂 博士
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Graduate Institute of Life Science,
National Defense Medical Center (NDMC),
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602 | 10:45 - 11:25

Using nutritional biochemistry and food frequency questionnaire to identify individual dietary and nutritional problems associated with CVMD

潘文涵 理事 / 中研院生物醫學研究所

心臟血管代謝疾病（CVMD）和飲食不當息息相關，飲食不當增加CVMD風險，是涉及多重路徑的，包括：

1. 動物性食脂肪、熱帶植物油（棕櫚油、椰子油）讓身體攝取太多飽和脂肪酸，導致血液中膽固醇增高，血壓上升。

2. 食物中鈉多、鉀鎂鈣等礦物質不足導致細胞內外陽離子（鈉鉀鈣）失衡，胰島素敏感度（鎂不足）下降，增加高血壓、糖尿病風險。

精緻澱粉攝取太多、纖維不足、熱量正向平衡，導致血糖調控異常、肥胖，增加代謝症候群、糖尿病、高三酸甘油酯、高血壓之風險。

3. 心臟血管代謝疾病，為慢性發炎疾病，攝取充足的抗發炎物質（如：omega-3　脂肪酸、及各種植化素），抗氧化物質（維生素C、E、胡蘿蔔素、植化素等）將有助於疾病之防治。

4.　維生素B2、B6、B12不足，可能提高同胱半胺酸，增加血液栓塞風險。

目前營養師執行之衛教，多詢問個案通常飲食攝取型態，可即時估計出6大類食物之份數，並以各種食物之量多量少食物品質，進行建議。諮詢時，若能同時掌握各種和心臟血管代謝疾病相關之營養素（鉀、鈣、鎂、膳食纖維、脂肪酸種類、抗氧化維生素、維生素B群等）攝取狀況或體內儲存狀況，營養師能更確定其諮詢方向。

使用飲食頻估軟體，詢問各種食物之攝食頻率，搭配各種食物類別營養素含量、以及份量大數據，可整合得到各種營養素攝入量並與理想建議量比較。若能使用血液尿液樣本進行營養生化分析，更可以得知各種水溶性維生素血中濃度和各種脂肪酸（飽和、不飽和）比例，24-小時尿液可測得鈣鎂鉀／肌酸酐比值，做為礦物質營養指標。前者簡易可行，然精準度不如營養生化指標；後者價位頗高，在現階段尚難普及，然未來仍有相當的發展潛能。

潘文涵 理事
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1980/01 - 1983/05
博士
美國 康乃爾大學
營養流行病學

1977/09 - 1979/12
碩士
美國 康乃爾大學
營養生化

1972/09 - 1976/06
學士
國立台灣大學 農業化學系

602 | 11:25 - 12:15

Precision dietetics

陳珮蓉 主任 / 臺大醫院 營養室

Precision dietetics stands as a promising paradigm for advancing cardiovascular disease (CVD) prevention through tailored dietary recommendations. Consensus among healthcare professionals underscores the inadequacy of a one-size-fits-all diet, highlighting the importance of categorizing individuals into distinct subgroups based on their unique CVD risk factors and responsiveness to food and nutrients. The implementation of personalized dietary strategies holds the potential to enhance adherence, effectiveness, and overall quality of life. Emerging evidence has elucidated the intricate interplay between DNA methylation and nutritional status across various life stages, encompassing fetal development, early life, and adulthood. Considering the dynamic and modifiable nature of DNA methylation, it could be a target for future precision dietary interventions aimed at both preventing and treating cardiometabolic diseases.

陳珮蓉 主任
臺大醫院 營養室

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RESEARCH AWARD & POSTER COMPETITION

王寧
理事

王朝永
醫師

RA-1 **12:55 - 13:10**

Research Award -
生物節律和肥胖對動脈硬化的複雜關係

Moderator:	王寧 理事 / 中華民國血脂及動脈硬化學會
Speaker:	王朝永 醫師 / 林口長庚 心臟內科

13:10 - 13:15

頒發海報論文獎　佳作
第三名
第二名
第一名

Moderator:	王寧 理事 / 中華民國血脂及動脈硬化學會

13:15 - 13:20

合照

602 | 12:55 - 13:10

生物節律和肥胖對動脈硬化的複雜關係

王朝永 醫師 / 林口長庚 心臟內科

在過去的二十多年中，我們的研究團隊深入探討了肥胖、生理時鐘和心血管疾病之間錯綜複雜的關係。我們主要關注的是肥胖與肥胖相關基因及其在生物鐘節律中的重要作用。我們發現，肥重基因(FTO)的缺陷可能導致生物鐘功能的異常。通過全基因組m6A定序，我們明確地看到了mRNA的30-50%會經歷生物鐘節律的m6A修飾。這一發現突顯了肥胖、和生物鐘節律在基因活性調節中的更廣泛互動。

基於這一基礎性的發現，我們進行了兩項最近的研究，進一步闡述這些連接。首先，識別與肥胖手術結果相關的循環miRNA標誌。我們的研究發現三種miRNA作為術後反應的區別因子，這表明了在肥胖手術前進行更精確的病人評估的有前景的途徑。第二項研究探索了光周期蛋白(CRY1/2)在動脈粥狀硬化中的作用。我們的發現指出，光周期蛋白在LDLR mRNA生物鐘節律的調節中扮演著角色，為治療性干預提供了新的角度。

展望未來，我們的目標是結合實驗室發現與臨床應用。由於肥胖和心血管疾病經常互相影響，因此了解這些分子途徑至關重要。我們對動脈粥狀硬化疾病患者的持續研究有望提供更多關於潛在風險因素和治療策略的見解。我們希望能夠對遺傳學、肥胖和心血管健康之間的互動有更深入和更全面的理解。

王朝永 醫師
林口長庚 心臟內科

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副研究員
國家衛生研究院

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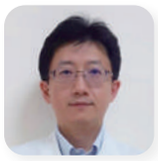
長庚大學 醫學系

LUNCHEON SYMPOSIUM 3
Organon 歐嘉隆



黃柏勳
理事長

王宇澄
醫師

13:20 - 13:30

Opening Remarks

Moderator:	黃柏勳 理事長 / 台北榮總 心臟內科

LC3-1 **13:30 - 13:50**

Lipid Matters
人選之人，血脂之事，乃是眾人之事—
Atorvastatin + Ezetimibe FDC
優化您的降脂選擇

13:50 - 14:00

Panel Discussion & Closing Remarks

Moderator:	黃柏勳 理事長 / 台北榮總 心臟內科
Speaker:	王宇澄 醫師 / 亞大附醫 心臟內科

602 | 13:30 - 14:00

Lipid Matters人選之人,血脂之事,乃是眾人之事— Atorvastatin + Ezetimibe FDC 優化您的降脂選擇

王宇澄 醫師 / 亞大附醫 心臟內科

Hyperlipidemia is a growing concern in Taiwan, with rates exceeding 25%.1 Unfortunately, LDL-C achievement rates in Taiwan are relatively low. Medical societies in Taiwan have updated treatment goals for high-risk and very-high-risk patients, highlighting the importance of reducing LDL-C by over 50%.2,3

The 2019 ACC/AHA guideline recommends an LDL-C goal of <55mg/dL and at least 50% reduction from baseline for very-high-risk patients. Moderate and severe CKD patients are classified as high-risk and very-high-risk for cardiovascular occurrences. Statins or statin/ezetimibe combination therapy is recommended for patients with non-dialysis-dependent stage 3-5 CKD.4 For high-risk and very-high-risk patients, the 2021 EAS Practical Guidance taskforce recommends upfront combination high-intensity statin-ezetimibe therapy, which allows for patients to reach their target as early as possible with a favorable impact on cardiovascular outcomes.5

To address the challenges of the Statin Rule of 6 in achieving LDL-C goals, ezetimibe in combination with a statin leads to greater LDL-C reductions.6 A high-intensity statin plus different lipid treatment will be more efficient in achieving lipid targets. Ezetimibe blocks NPC1L1 on the surface of intestinal cells, while ezetimibe and statins have complementary modes of action.

Several studies have addressed the powerful efficacy of atorvastatin/ezetimibe. Atorvastatin/ezetimibe leads to a significant decrease in LDL-C levels compared to monotherapy. In the PACE study, atorvastatin/ezetimibe resulted in a higher proportion of patients achieving their lipid goal after 6 weeks of therapy.7

Although there are several lipid treatment decisions for CKD patients, choosing the appropriate lipid treatment for CKD stage 3-5 patients is crucial. The International Kidney Report shows that 37% of CKD patients should receive lipid-lowering treatment but don't, and 51% of CKD patients do not control their lipid levels well.8 Combination treatment can significantly increase the achievement rate. To choose the appropriate treatment, atorvastatin/ezetimibe provides a potent and safe option for a broader patient population.

In conclusion, according to current treatment guidance and relevant studies, lipid treatment should be tailored to a patient's potential CV risks and underline diseases. Lipid management should be powerful and carefully prescribed along with a patient's renal function, with atorvastatin/ezetimibe combination therapy being a preferred option beyond mono-statin therapy for patients who need to closely monitor their LDL-C goals.

王宇澄 醫師
亞大附醫 心臟內科

Present Position 現職

2022 - Present
專任副教授
亞洲大學 醫學檢驗暨生物技術學系

2021 - Present
主任
亞大附屬醫院 內科

2019 - Present
兼任主治醫師
中國醫附醫 心臟血管系

2016 - Present
主任
亞大附屬醫院 心臟科

Education 學歷

2010 - 2016
博士
中國醫藥大學 臨床醫學研究所

1994 - 2000
醫學士
國立陽明交通大學 醫學系

DM SYMPOSIUM


陳榮福
理事


許惠恆
常務理事


歐弘毅
醫師


沈峰志
醫師


呂介華
醫師

14:00 - 14:05 Opening Remarks

Moderator:	陳榮福 理事 / 高雄長庚 內分泌新陳代謝科

DMS-1 **14:05 - 14:25** Current unmet needs of diabetic dyslipidemia in Taiwan

14:25 - 14:30 Discussion

Moderator:	陳榮福 理事 / 高雄長庚 內分泌新陳代謝科
Speaker:	歐弘毅 醫師 / 成大醫院 內分泌新陳代謝科

DMS-2 **14:30 - 14:50** New Strategies and Technologies in Controlling Diabetes Dyslipidemia

14:50 - 14:55 Discussion

Moderator:	陳榮福 理事 / 高雄長庚 內分泌新陳代謝科
Speaker:	沈峰志 醫師 / 高雄長庚 內分泌新陳代謝科

DMS-3 **14:55 - 15:15** Best Practice of Lipid Control in Diabetes

15:15 - 15:20 Discussion

Moderator:	許惠恒 常務理事 / 國家衛生研究院
Speaker:	呂介華 醫師 / 三軍總醫院 內分泌新陳代謝科

15:20 - 15:30 Panel Discussion & Closing Remarks

Moderator:	許惠恒 常務理事 / 國家衛生研究院

602 | 14:05 - 14:30

Current unmet needs of diabetic dyslipidemia in Taiwan

歐弘毅 醫師 / 成大醫院 內分泌新陳代謝科

(TO BE PRESENTED)

歐弘毅 醫師
成大醫院
內分泌新陳代謝科

Present Position 現職

2018/08 - Present
教授
國立成功大學 醫學系
2017/08 - Present
合聘教授
國立成功大學 醫學院
臨床醫學研究所
2015/08 - Present
主任
成大醫院 內分泌新陳代謝科
2002/08 - Present
主治醫師
成大醫院 內分泌新陳代謝科

Education 學歷

博士
國立成功大學 臨床醫學研究所
醫學士
台北醫學大學 醫學系

602 | 14:30 - 14:55

New Strategies and Technologies in Controlling Diabetes Dyslipidemia

沈峰志 醫師 / 高雄長庚 內分泌新陳代謝科

Dyslipidemia among individuals living with type 2 diabetes (T2D) remains inadequately managed on a global scale, with just around a quarter of patients achieving the desired target for low-density lipoprotein cholesterol (LDL-C) levels. Several factors contribute to this situation, encompassing physician inertia within both diabetologists and cardiologists, nonadherence to therapy, as well as suboptimal utilization and dosing of lipid-lowering medications due to inappropriate cardiovascular (CV) risk assessment.

Recent years have seen extensive discourse regarding the risk stratification of patients living with T2D, with compelling indications that all individuals with diabetes should be classified as being at least at a high risk of cardiovascular disease (CVD). Furthermore, the emergence of lipid-lowering drugs that not only effectively lower LDL-C levels without elevating the risk of new-onset diabetes (NOD) or glucose impairment, but in certain cases, even contribute to improved glucose control, has reshaped the landscape.

沈峰志 醫師
高雄長庚
內分泌新陳代謝科

Present Position 現職

副主任
高雄長庚 內分泌暨新陳代謝科
主治醫師
高雄長庚 新陳代謝科

Education 學歷

醫學士
中國醫藥大學 醫學系

602 | 14:55 - 15:20

Best Practice of Lipid Control in Diabetes

呂介華 醫師 / 三軍總醫院 內分泌新陳代謝科

糖尿病患者的血脂異常是心血管疾病 cardiovascular disease (CVD) 可改變的危險因素，是一個重要的治療目標。儘管血脂異常的主要治療目標是控制低密度脂蛋白膽固醇 low density lipoprotein cholesterol (LDL C)C)，但根據最近的研究，實現這一目標仍然不夠理想。根據準確的 CVD 風險評估來設定 LDL C 控制目標非常重要。在此，我們總結了糖尿病患者血脂管理的最新證據，並根據糖尿病病程、是否存在 CVD 、器官損傷或主要心血管危險因素，提出相關治療的目標。對於患有第 2 型糖尿病 type 2 diabetes mellitus (T2DM) 和 CVD 的患者，建議 LDL C 目標為 <55 mg/dL dL，並且 LDL C 水平較基線降低 50%或更多。對於糖尿病病程 ≥10 年、存在重大心血管危險因素或靶器官損害的T2DM 患者的CVD 一級預防，建議LDL C 目標<70 mg/dL 。對於糖尿病病程<10 年且無主要心血管危險因素的T2DM 患者，建議LDL C 目標<100 mg/dL。

呂介華 醫師
三軍總醫院
內分泌新陳代謝科

Present Position 現職

Attending Physician
Division of Endocrinology and Metabolism, Department of Internal Medicine, Tri-Service General Hospital, Taipei.

Education 學歷

1993 - 2000
M.D.,
School of Medicine, National Defense Medical Center, National Defense University, Taipei, Taiwan.

國衛院: 從血脂、代謝、血流到動脈硬化及主動脈瘤


黃柏勳
理事長


許惠恆
常務理事


王朝永
副秘書長


林秀芳
研究員


裘正健
特聘研究


郭呈欽
研究員


蔡曜聲
教授

09:00 - 09:04 **Opening Remarks**

Moderator: 許惠恒 常務理事 / 國衛院副院長

09:04 - 09:06 **Introduction**

NHI-1 09:06 - 09:26 **Phosphoprotein modulations of vascular endothelial functions and atherosclerosis development under flow**

09:26 - 09:31 **Discussion**

Moderator: 許惠恒 常務理事 / 國衛院副院長
Speaker: 裘正健 特聘研究 / 國衛院 細胞及系統醫學研究所

09:31 - 09:33 **Introduction**

NHI-2 09:33 - 09:53 **Endothelial-derived 5-methoxytryptophan as an arsenal against atherosclerotic arterial calcification**

09:53 - 09:58 **Discussion**

Moderator: 王朝永 副秘書長 / 林口長庚 心臟內科
Speaker: 郭呈欽 研究員 / 國衛院 細胞及系統醫學研究所

09:58 - 10:00 **Introduction**

NHI-3 10:00 - 10:20 **Aortic stiffness and aortic aneurysm**

10:20 - 10:25 **Discussion**

Moderator: 林秀芳 研究員 / 國衛院 細胞及系統醫學研究所
Speaker: 蔡曜聲 教授 / 成功大學 臨床醫學研究所

10:25 - 10:30 **Closing Remarks**

Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科

603 | 09:06 - 09:31

Phosphoprotein modulations of vascular endothelial functions and atherosclerosis development under flow

裘正健 研究員 / 國衛院細胞及系統醫學研究所

Atherosclerosis preferentially develops in arterial branches and curvatures where vascular endothelium is exposed to disturbed flow. This study aims at elucidating the effects of disturbed flow on the regulation of vascular endothelial phosphoproteins and their contribution to and therapeutic application in atherogenesis. This study used a combination of porcine models, large-scale phosphoproteomics, transgenic mice, and clinical specimens to discover novel site-specific phosphorylation alterations induced by disturbed flow in endothelial cells (ECs). Through large-scale phosphoproteomics analysis of native endothelium from disturbed (athero-susceptible) vs. pulsatile flow (athero-resistant) regions of porcine aortas, we have identified a novel atherosclerosis-related phosphoprotein vinculin (VCL) whose phosphorylation at serine 721 (VCLS721p) is induced by disturbed flow. This VCLS721p is mediated by G-protein-coupled receptor kinase 2 (GRK2)S29p and induces an inactive form of VCL with a closed conformation, leading to VE-cadherin/catenin complex disruption to enhance endothelial permeability and atherosclerosis. Generation of novel transgenic mice bearing endothelial-specific overexpression of S721-non-phosphorylatable VCL mutant in apolipoprotein E-deficient (ApoE-/-) mice confirms the critical role of VCLS721p in promoting atherosclerosis. Administration of a GRK2 inhibitor to ApoE-/- mice inhibits plaque formation via inhibiting endothelial VCLS721p. Investigations on clinical specimens from patients with coronary artery disease (CAD) demonstrate that endothelial VCLS721p is a critical clinicopathological biomarker for atherosclerosis progression, and that the serum VCLS721p level is a promising biomarker for CAD diagnosis. Our findings suggest that endothelial VCLS721p is a valuable hemodynamic-based target for clinical assessment and treatment of vascular disorders resulting from atherosclerosis.

裘正健 特聘研究
國衛院細胞及系統醫學研究所

Present Position 現職

2016/02 - Present
Distinguished Investigator,
Institute of Cellular and System Medicine, National Health Research Institutes, Taiwan.

2012/08 - Present
Joint Appointed Professor,
Institute of Biomedical Engineering, National Tsing Hua University, Taiwan.

Education 學歷

1992/11
Ph.D.
Blood Flow Mechanics,
Institute of Aeronautics and Astronautics, National Cheng Kung University, Taiwan.

603 | 09:33 - 09:58

Endothelial-derived 5-methoxytryptophan as an arsenal against atherosclerotic arterial calcification

郭呈欽 研究員 / 國衛院細胞及系統醫學研究所

The main underlying cause of cardiovascular disease is atherosclerosis and atherosclerotic calcification which have been recognized as a chronic inflammatory disease. 5-MTP is a newly discovered anti-inflammatory tryptophan metabolite which acts as a circulating autacoid to defend against systemic inflammation, It is an interesting issue to investigate the physiological role of 5-MTP in cardiovascular diseases. The results revealed that an obvious neointimal lesion, atherosclerotic chondrogenic differentiation, and calcification occurred in the aortic sections of *ApoE*$^{-/-}$ mice fed HFD, which was accompanied by decreasing 5-MTP level compared with those of Chow diet-fed *ApoE*$^{-/-}$ mice. Corresponding to the 5-MTP reduction in vascular cells, plasma 5-MTP levels in HFD-fed *ApoE*$^{-/-}$ mice were significantly lower than that in *ApoE*$^{-/-}$ mice fed control chow. Notably, HFD-mediated atherosclerotic chondrogenesis and calcification and downregulation of 5-MTP in the atherosclerotic lesion of *ApoE*$^{-/-}$ mice were concurrently prevented in *ApoE*$^{-/-}$*Tlr2*$^{-/-}$ mice. This suggests that HFD reduces vascular 5-MTP production via TLR2. Intraperitoneal injection of 5-MTP or its analog into *ApoE*$^{-/-}$ mice fed HFD reduced aortic atherosclerotic lesions and calcification which was accompanied by a reduction of chondrogenesis and calcium deposition. The mechanistic results suggest that 5-MTP is a vascular arsenal against atherosclerosis and calcification by inhibiting TLR2-mediated VSMC phenotypic switch to chondrocytes and the consequent calcification. 5-MTP exerts these effects by blocking p38 MAPK activation and inhibiting CREB and NF-κB transactivation activity. These results suggest that endothelium-derived 5-MTP may be a valuable lead compound for developing new chemoprevention approaches against atherosclerotic progression and calcification.

郭呈欽 研究員
國衛院細胞及系統醫學研究所

Present Position 現職

2020/04 - Present
Investigator,
Institute of Cellular and System Medicine, National Health Research Institutes.
2020/08 - Present
Joint Appointed Professor,
Graduate Institute of Basic Medical Science, China Medical University.

Education 學歷

1997 - 2001
Ph.D.,
Life Science, National Defense Medical Center, Taipei, Taiwan.
1995 - 1997
M.S.,
Biochemistry, National Defense Medical Center, Taipei, Taiwan.

603 | 10:00 - 10:25

Aortic stiffness and aortic aneurysm

蔡曜聲 教授 / 成功大學 臨床醫學研究所

Abdominal aortic aneurysm (AAA) is a relatively common disease that exhibits progressive dilation of abdominal aorta with a high prevalence of death due to aortic rupture. A major histopathological hallmark of AAA is the severs degeneration of aortic media with loss of vascular smooth muscle cells (VSMCs), which are the main source of extracellular matrix (ECM) proteins. Recent studies suggest loss of integrity and changes of tissue stiffness are key features of AAA development. In this presentation, we will dissect the cause of AAA from the aspects of elastic fiber integrity and compensatory collagen deposition influenced by different molecules, including a transcriptional factor peroxisome proliferator-activated receptor γ (PPARγ) and a membrane coreceptor tumor endothelial marker 1 (TEM1). Our studies reveal the importance of proper elastogenesis and appropriate collagen deposition in the therapeutics against AAA development.

蔡曜聲 教授
成功大學 臨床醫學研究所

Present Position 現職

2016/08 - Present
Professor
Institute of Clinical Medicine, National Cheng Kung University, Tainan.
2016/08 - Present
Adjunct Professor
Department of Physiology, National Cheng Kung University, Tainan.

Education 學歷

2000/08 - 2005/08
Ph.D.,
Department of Pathology and Laboratory Medicine, University of North Carolina at Chapel Hill
1994/09 - 1996/06
M.S.,
Department of Biochemistry, National Cheng Kung University, Tainan.

JOINT SYMPOSIUM
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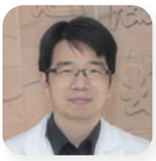
黃柏勳
理事長


謝宜璋
常務理事


王宇澄
理事


吳承學
秘書長


林威宏
醫師


劉嚴文
醫師


朱俊源
醫師

10:45 - 10:50 **Opening Remarks**

Moderator:	黃柏勳 理事長 / 中華民國血脂及動脈硬化學會

JS1-1 10:50 - 11:10 **The change of lipid profiles in patients with advanced CKD**

11:10 - 11:15 **Discussion**

Moderator:	謝宜璋 常務理事 / 中華民國血脂及動脈硬化學會
Speaker:	林威宏 醫師 / 成大醫院 一般內科

JS1-2 11:15 - 11:35 **What happens in vascular pathophysiology in patients with advanced CKD**

11:35 - 11:40 **Discussion**

Moderator:	王宇澄 理事 / 台灣心肌梗塞學會
Speaker:	劉嚴文 醫師 / 成大醫院 心臟內科

JS1-3 11:40 - 12:00 **Where we stand in managements of dyslipidemia in ACS patients with advanced CKD**

12:00 - 12:05 **Discussion**

Moderator:	吳承學 秘書長 / 台灣心肌梗塞學會
Speaker:	朱俊源 醫師 / 高醫副醫 心臟內科

12:05 - 12:15 **Closing Remarks**

Moderator:	吳承學 秘書長 / 台灣心肌梗塞學會

12:15 - 12:30 **Lunch Break**

603 | 10:50 - 11:15

The change of lipid profiles in patients with advanced CKD

林威宏 醫師 / 成大醫院 一般內科

Patients with advanced CKD (chronic kidney disease) often have dyslipidemia, which is an abnormal level of lipids in the blood. The most common lipid abnormalities in CKD are hypertriglyceridemia (high levels of triglycerides) and low levels of HDL-cholesterol (the good cholesterol). LDL-cholesterol (the bad cholesterol) levels may be normal or slightly elevated, but they are more likely to be oxidized and atherogenic (causing plaque buildup in the arteries).

Dyslipidemia in CKD is caused by various factors, such as impaired lipid metabolism, inflammation, oxidative stress, uremic toxins, hormonal changes, and medication use. Dyslipidemia contributes to the increased risk of cardiovascular disease (CVD), which is the leading cause of death in CKD patients. Therefore, managing dyslipidemia is important for preventing CVD and improving outcomes in CKD patients.

The optimal treatment strategy for dyslipidemia in CKD patients is not well established, but it may include lifestyle modifications, pharmacological interventions, and renal replacement therapy. Statins are the main class of drugs used to lower LDL-cholesterol and reduce CVD events in CKD patients who are not on dialysis.

林威宏 醫師
成大醫院 一般內科

Present Position 現職

2019/08 - Present
執行長
成大醫院 教學中心
2014/08 - Present
臨床助理教授
成大醫院 醫學系
2006/08 - Present
主治醫師
成大醫院 一般內科

Education 學歷

博士
國立成功大學 臨床醫學研究所
醫學士
國立成功大學 醫學系

603 | 11:15 - 11:40

What happens in vascular pathophysiology in patients with advanced CKD

劉嚴文 醫師 / 成大醫院 心臟內科

Chronic kidney disease (CKD) has been proven as an independent risk factor for cardiovascular diseases. It may be because accumulation of uremic toxins, chronic inflammation, and oxidative stress increase cardiovascular risk, in particular atherosclerosis and vascular calcification (VC). VC is a multifactorial, cell-mediated process which may induce a phenotype switch of vascular smooth muscle cells to osteoblast-like cells. Moreover, intercellular communication pathways and microRNAs represent key mechanisms in VC. It is emphasized that vascular alterations and more recently discovered molecular pathways may present possible new therapeutic targets.

劉嚴文 醫師
成大醫院 心臟內科

Present Position 現職

2021/08 - Present
教授
國立成功大學 內科
2021/08 - Present
教授
國立成功大學 心臟內科
2012/08 - Present
主治醫師
成大醫院 心臟內科

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博士
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醫學士
國立成功大學 醫學系

603 | 11:40 - 12:05

Where we stand in managements of dyslipidemia in ACS patients with advanced CKD

朱俊源 醫師 / 高醫附醫 心臟內科

(TO BE PRESENTED)

朱俊源 醫師
高醫附醫 心臟內科

Present Position 現職

主治醫師暨專科指導醫師
高醫附醫 心臟血管內科
助理教授
高雄醫學大學 醫學院 醫學系
內科學科

Education 學歷

博士班研讀
高雄醫學大學 臨床醫學研究所
碩士
高雄醫學大學
研究所臨床醫學組
醫學士
高雄醫學大學

LUNCHEON SYMPOSIUM 4
Tanabe 台田

陳肇文
名譽理事

江亮霆
醫師

12:30 - 12:35

Opening Remarks

Moderator: 陳肇文 名譽理事 / 北醫附醫 心臟內科

LS4-1 12:35 - 13:05

Lipid Management for Primary Prevention: Update for Pitavastatin

Moderator: 陳肇文 名譽理事 / 北醫附醫 心臟內科
Speaker: 江亮霆 醫師 / 輔大醫院 心臟內科

13:05 - 13:15

Closing Remarks

Moderator: 陳肇文 名譽理事 / 北醫附醫 心臟內科

603 | 12:35 - 13:05

Lipid Management for Primary Prevention: Update for Pitavastatin

江亮霆 醫師 / 輔大醫院 心臟內科

Taiwan Society of Lipids & Atherosclerosis revised the "Taiwan lipid guidelines for Primary Prevention" in 2022. This revision introduced new definitions of risk factors, including Metabolic Syndrome as the sixth risk factor. Additionally, patients with CKD, DM, and LDL-C levels greater than 190mg/dL were categorized as high-risk primary prevention patients. The recommended target for LDL-C control in high-risk primary prevention patients was set at below 100mg/dL. Furthermore, patients with lower cardiovascular risk were divided into three tiers. Patients with two risk factors saw their initial LDL-C treatment target lowered from 130mg/dL to 115mg/dL. Those with one risk factor had their target lowered from 160mg/dL to 130mg/dL, while patients with no risk factors had their target lowered from 190mg/dL to 160mg/dL.

Statin medications are widely used in patients with high cholesterol and high blood lipids. Numerous studies have shown that statins effectively lower LDL-C levels and reduce the occurrence of cardiovascular diseases. However, for patients in primary prevention, not only efficacy but also safety should be considered. Multiple research studies have indicated that with longer duration and higher dosages of statin use, the risk of developing new-onset diabetes increases. Muscle pain is also a common side effect of statins. Therefore, should we not prioritize choosing statins that balance both safety and efficacy for primary prevention patients?

In addition to guiding physicians to provide the most appropriate clinical treatment recommendations based on the guidelines, it is hoped that the "Taiwan lipid guidelines for Primary Prevention" will enhance the quality of lipid treatment, improve the prognosis of cardiovascular disease treatment for the population, and place greater emphasis on protection through primary prevention. The earlier, the better.

江亮霆 醫師
輔大醫院 心臟內科

Present Position 現職

主治醫師
輔大醫院 心臟內科
兼任主治醫師
台大醫院

Education 學歷

醫學士
國立台灣大學 醫學系

姜必寧獎得獎者演講

林幸榮
名譽理事

洪傳岳
名譽理事

楊荔丹
醫師

13:15 - 13:20

Opening Remarks

Moderator:	林幸榮 名譽理事 / 台北榮總 心臟內科

BNCA-1 13:20 - 13:40

慢性主動脈逆流研究的最新進展

Moderator:	洪傳岳 名譽理事 / 萬芳醫院 心臟內科
Speaker:	楊荔丹 醫師 / 台大醫院 心臟內科

13:40 - 13:45

Closing Remarks

Moderator:	洪傳岳 名譽理事 / 萬芳醫院 心臟內科

603 | 13:20 - 13:40

慢性主動脈逆流研究的最新進展

楊荔丹 醫師 / 台大醫院 心臟內科

本次演講將先分享此次得獎論文之發現，再深入探討慢性主動脈逆流（Chronic Aortic Regurgitation）研究的最新發展，內容涵蓋了包含本篇論文在內的一系列相關研究，這些研究挑戰了傳統治療觀念，喚起人們對慢性主動脈逆流的重視，從而改善患者的預後。

內容包括：

1. 亞洲族群慢性主動脈逆流的預後；亞洲族群與西方族群之比較
2. 當代慢性主動脈逆流的預後
3. 雙葉型主動脈瓣
4. 主動脈瓣逆流之性別差異
5. 慢性主動脈瓣逆流的機轉與原因
6. 慢性主動脈逆流的疾病進展速度
7. 舒張壓與心跳在慢性主動脈逆流之重要性

楊荔丹 醫師
台大醫院 心臟內科

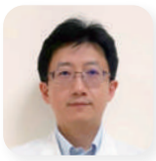
Present Position 現職

2021 - Present
Assistant professor,
National Taiwan University College of Medicine, Taipei, Taiwan.
2020 - Present
Attending Physician,
Division of Cardiology, Department of Internal Medicine, National Taiwan UniversityHospital, Taipei, Taiwan.

Education 學歷

2001/09 -2008/06
M.D.,
National Cheng Kung University Hospital, Tainan, Taiwan.

JOINT SYMPOSIUM
台灣血脂衛教協會


黃柏勳
理事長


劉秉彥
秘書長


吳造中
理事長


吳彥雯
秘書長

	14:00 - 14:05	**Opening Remarks** Moderator: 吳造中 理事長 / 台大醫院 心臟內科
JS2-1	14:05 - 14:25	**How to select the lipid lowering therapy- The past and present**
	14:25 - 14:30	**Discussion** Moderator: 吳造中 理事長 / 台大醫院 心臟內科 Speaker: 劉秉彥 秘書長 / 成大醫院 心臟內科
JS2-2	14:30 - 14:50	**How to select the lipid lowering therapy- The future**
	14:50 - 14:55	**Discussion** Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科 Speaker: 吳彥雯 秘書長 / 亞東醫院 心臟內科
JS2-3	14:55 - 15:15	**How to select and when to refer the patients? --- An AI-referral system**
	15:15 - 15:20	**Discussion** Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科 Speaker: 吳造中 理事長 / 台大醫院 心臟內科
	15:20 - 15:30	**Panel Discussion & Closing Remarks** Moderator: 黃柏勳 理事長 / 台北榮總 心臟內科

603 | 14:05 - 14:30

How to select the lipid lowering therapy- The past and present

劉秉彥 秘書長 / 成大醫院 心臟內科

(TO BE PRESENTED)

劉秉彥 秘書長
成大醫院 心臟內科

Present Position 現職

2023/08 - Present
部主任
成大醫院 內科部
2015/08 - Present
教授
國立成功大學
臨床醫學研究所
2008/08 - Present
主治醫師
成大醫院 心臟血管內科

Education 學歷

博士
國立成功大學 臨床醫學研究所
醫學士
高雄醫學大學 醫學系

603 | 14:30 - 14:55

How to select the lipid lowering therapy- The future

吳彥雯 秘書長 / 亞東醫院 心臟內科

Dyslipidemia, especially low- and high-density lipoprotein cholesterol (LDL-C), causes atherosclerotic cardiovascular disease and increases the risk of myocardial infarction and stroke. Statins, a class of drugs that exert their effects by inhibiting HMG-CoA reductase have been the mainstay of therapy for the primary prevention of cardiovascular disease and lipids reduction. However, they are associated with side effects, most commonly myopathy and myalgias, despite their proven efficacy. Beyond LDL cholesterol, also other lipid mediators contribute to cardiovascular risk, such as small dense LDL, high-density lipoprotein cholesterol, lipoprotein (a), triglycerides as well as fatty acids and derivatives. Over the previous decades, several lipid-lowering therapies, both as monotherapy and adjuncts to statin therapy and lipid-targeting gene therapy, have emerged, thus redefining how we treat dyslipidemia. These drugs include bile acids sequestrants, fibrates, nicotinic acid, ezetimibe, bempedoic acid, volanesoren, evinacumab, and the PCSK 9 Inhibitors evolocumab and alirocumab. Emerging gene-based therapy includes small interfering RNAs, antisense oligonucleotides, adeno-associated virus vectors, CRISPR/Cas9 based therapeutics, and non-coding RNA therapy. Of all these therapies, bempedoic acid works most like statins by working through a similar pathway to decrease cholesterol levels. However, it is not associated with myopathy. The safety profile of most current RNA-based lipid therapies is acceptable but adverse events associated with various therapies targeting lipid pathways have included injection site reactions, inflammatory reactions, hepatic steatosis and thrombocytopenia. Overall, although statins continue to be the gold standard, non-statin therapies are set to play an increasingly important role in managing dyslipidemia.

This talk will explore the mechanistic insights into the roles of these therapies in pathological processes impacting on cardiovascular disease, examines recent advances and emerging research. Emerging therapeutic strategies to reduce lipid-induced cardiovascular burden will be discussed. While the body of evidence for these novel therapies is expanding, clinical experience with these therapies is currently limited in duration and the results of long-term studies are eagerly awaited.

吳彥雯 秘書長
亞東醫院 心臟內科

Present Position 現職

2020/07 - Present
主任
亞東醫院 心臟血管醫學中心
2012/03 - Presenr
主治醫師
亞東醫院 心臟內科及核子醫學科
2018/08 - Present
兼任教授
國立陽明交通大學 醫學系

Education 學歷

博士
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臨床醫學研究所
碩士
國立台灣大學
臨床醫學研究所
醫學士
國立台灣大學醫學院
醫學系

603 | 14:55 - 15:20

How to select and when to refer the patients? -- An AI-referral system

吳造中 理事長 / 台大醫院 心臟內科

(TO BE PRESENTED)

吳造中 理事長
台大醫院 心臟內科

Present Position 現職

主治醫師
台大醫院 心臟內科
教授
國立台灣大學 醫學院醫學系
共同召集人
台大醫院 共同教育培訓中心
教學評鑒組

Education 學歷

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醫學士
國立台灣大學 醫學系

Poster Presentation

*按姓氏筆畫排序

卓若羚	Investigation of Nitroxoline in Modulating Hepatic Lipid Metabolisms and Improving Atherosclerosis
周彥宏	AD-9308 Targeting Pulmonary Arterial hypertension Therapy for Patients with ALDH2 Nonfunctional Alleles
周睿信	Continuing RAASi did not increase risk of advanced AKI or mortality in critically ill patients with early-stage renal injury
林維文	Oral vaccination of LZ8-Lactococcus lactis prevents Nonalcoholic Fatty Liver and Early Atherogenesis in Cholesterol-fed Rabbits
連志峯	Enhancement of Hepatic Cholesterol Efflux by Chalcone Derivative 1m: Hepatoprotective and Atheroprotective Effects in Experimental Atherosclerosis
陳其宇	Tributyrin Consumption Mitigates Angiotensin II-Induced Abdominal Aortic Aneurysm in LDLR-/- Mice
黃逸群	MicroRNA Dynamics in Irisin-Mediated Signaling Pathways within Adipose Tissue
盧雅雯	Sex difference in the association of the triglyceride glucose index with obstructive coronary artery disease

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【適應症】Efient®適用於需要冠狀動脈介入性治療(PCI)的急性冠狀動脈症候群(ACS：不穩定型心絞痛[UA]、非ST段上升之心肌梗塞[NSTEMI]或ST段上升之心肌梗塞[STEMI])。

【適應症相關注意事項】當醫師根據冠狀動脈攝影結果，決定採用保守治療(conservative therapy)或冠狀動脈繞道手術來取代PCI時，應停止使用Efient®。

【用法用量】Efient®的起始劑量為單次使用20 mg口服劑量，隨後的維持劑量則採用每日一次3.75 mg口服劑量。

【用法用量相關注意事項】Efient®應合併aspirin使用(81 - 100 mg/天，起始劑量最多為324 mg)。在進行PCI之前，已經接受Efient® 3.75 mg劑量約5天的病人，不需要使用起始劑量(即治療第一天的起始劑量20 mg)。Efient®所引發的血小板凝集抑制作用，預計會在5天內達到穩定態。不建議於空腹情況下使用Efient®，使用起始劑量時除外。空腹狀態相較於飽足狀態用藥會有較高的最高血中濃度(Cmax)。體重偏低的病人(體重 ≤ 50 kg)其出血風險可能較高。目前對此族群尚無足夠資料以提供建議劑量。Efient®口溶錠可在不配水的情況下服用，因為它在舌頭上經唾液濕潤後會崩解。Efient®口溶錠也可以配水服用。臥躺時，請勿在沒有配水的情況下服用Efient®口溶錠。

【重要注意事項】(1)請留意起始劑量和aspirin併用時，可能會增加出血的風險。(2)Efient®所引發的血小板凝集抑制作用，可能會對要接受手術的病人造成問題，建議臨床醫師在術前至少14天停止使用Efient®。(3)抗凝血劑、aspirin和Efient®併用時應謹慎，因為併用可能會增加出血風險。(4)Efient®可能造成血栓性血小板低下紫斑症(thrombotic thrombocytopenic purpura，TTP)和其他臨床重要不良反應。在Efient®治療開始的前2個月，請考慮約每兩週進行一次血液檢測。(5)植入支架的病人使用Efient®之前，請先詳閱支架說明書 “警語” 及 “不良事件” 段落。

【特殊族群病人注意事項】有併發症或病史、腎功能不全、肝功能不全、孕婦、授乳、兒童、老年的病人，Efient®可能增加出血風險。

【禁忌症】Efient®不得使用於下列病人 1. 有出血症狀的病人(血友病、顱內出血、消化道出血、尿道出血、咳血、玻璃體出血等)。[Efient®可能會加重出血情形。] 2. 對於Efient®任何成分有過敏病史的病人。

【不良反應】可能出現以下不良反應，因此要密切監測，且如果發現異常，應採取適當的措施。例如停止給藥。臨床上重要的不良反應：出血 (發生率1.2%)、血栓性血小板低下紫斑症(TTP) (頻率未知)、過敏(頻率未知)、肝功能異常和黃疸(頻率未知)、顆粒白血球缺乏症(agranulocytosis)、再生不良性貧血和其他形式的全血球減少症(pancytopenia) (頻率未知)。完整資料請參見Efient®膜衣錠或口溶錠仿單。

Daiichi-Sankyo

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【適應症】 高膽固醇血症、高三酸甘油脂血症。對於臨床上沒有冠心病的第二型糖尿病病人，但是至少有任一其他冠心病危險因子，包括高血壓、視網膜病變、白蛋白尿、或吸菸，Lipitor 適用於：降低心肌梗塞的風險、降低中風的風險。降低冠心病高危險群的心血管事件發生率：對於臨床上沒有冠心病的高血壓病人，但是至少有三個其他冠心病危險因子，包括第二型糖尿病、年紀大於等於 55 歲、微白蛋白尿或蛋白尿、吸菸或第一等親在 55 歲 (男性) 或 60 歲 (女性) 前曾發生冠心病事件，Lipitor 適用於：降低心肌梗塞的風險、降低中風的風險、降低血管再造術與心絞痛的風險。

【用法與用量】 口服使用，劑量範圍是 atorvastatin 10-80 mg，每日服用一次。服藥時間早晚不拘，隨餐或空腹均可，起始劑量和維持劑量應根據病人 LDL-膽固醇的基礎值、治療目標與治療成效個別調整。開始 atorvastatin 治療及/或調整劑量之後，應在 2-4 週內檢查血脂濃度，並依照結果調整劑量。腎功能不全病人無須調整劑量。肝功能不全病人之使用，參閱禁忌及警語及注意事項。

【禁忌事項】 Lipitor禁用於有活動性肝病包括肝臟轉胺酶不明原因的持續上升之病人。對本藥任何成分過敏、懷孕、哺乳之病人。

【警語及注意事項】 ．**肌肉病變和橫紋肌溶解症**：Lipitor可能會造成肌肉病變（肌肉疼痛、壓痛或無力，並伴隨肌酸激酶(creatine kinase, CK) 濃度超過正常值上限十倍）和橫紋肌溶解症（伴隨或沒有伴隨次發於肌紅蛋白尿的急性腎衰竭）。曾罕見發生因服用statin 類藥物（包括Lipitor）治療而引起橫紋肌溶解症致死的事件。。**免疫引起之壞死性肌肉病變**：罕有免疫引起之壞死性肌肉病變(immune-mediated necrotizing myopathy [IMNM])的報告，這是一種自體免疫肌肉病變，與使用statin 類藥物有關。 **肝功能障礙**：本品可能引起病人肝轉氨酶的持續升高，建議所有病人於起始治療前接受肝功能檢測，並告知病人於治療時應注意是否出現肝損傷之症狀，包括疲勞、食慾減退、右上腹不適、尿色深或黃疸等。建議於用藥前、出現肝損傷之臨床症狀時（如疲勞、食慾減退、體重減輕、右上腹不適、深色尿或黃疸等）、提高劑量、更換藥品品項，或臨床醫師認為需要時監測肝功能。 ．**內分泌功能醣化血色素 (HbA1c) 上升**：病人接受 HMG-CoA 還原酶抑制劑 (statin 類藥品) 治療後，曾有醣化血紅素及/或空腹血糖血糖值上升的情況。 ． **使用於近期中風或 TIA 病人**：在一項積極降低膽固醇濃度之中風預防 (SPARCL) 試驗，治療組間的致死出血性中風發生率相近，atorvastatin 組的非致死出血性中風發生率顯著高於安慰劑組。

【不良反應】 發生率≥2%且高於安慰劑組的臨床不良反應：鼻咽炎、關節痛、腹瀉、四肢疼痛、尿道感染、消化不良、噁心、肌肉骨骼疼痛、肌肉痙攣、肌痛、失眠、咽喉疼痛。安慰劑對照研究中見於報告的其它不良反應包括: 發燒、肝炎、轉胺酶升高、夢魘、荨麻疹、視覺模糊。

【備註】 *此為處方資訊摘要，完整處方資訊請詳閱仿單。

VIATRIS 暉致

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處方資訊摘要[**本藥須由醫師處方使用**]

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用法/用量:

1.禁止與ACEI 併用。如欲從原本使用的 ACEI 轉換為 ENTRESTO®，兩種藥物須間隔 36 小時的排除期。2.建議起始劑量: 每日兩次 100 毫克，依據耐受情況於 2-4 週後加倍劑量，達到每日兩次 200 毫克的目標維持劑量。3.未使用ACEI或ARB或使用低劑量前述藥物: 建議之起始劑量為每日兩次 50 毫克。依據患者耐受情況，每 2-4 週加倍劑量，達到每日兩次 200 毫克的目標維持劑量。腎功能不全: 輕度或中度腎功能不全，不需調整起始劑量。重度腎功能不全 (eGFR < 30 mL/min/1.73 m2)之建議起始劑量，為每日兩次 50 毫克。肝功能不全: 輕度肝功能不全(Child-Pugh A)，不需調整起始劑量。中度肝功能不全 (Child-Pugh B)之建議起始劑量，為每日兩次 50 毫克。不建議重度肝功能不全 (Child-Pugh C) 使用此藥物。老年人: 65 歲以上患者的藥物動力學並未觀察到相關差異。懷孕及哺乳: 用於懷孕女性會對胎兒造成傷害。不建議在哺乳期間接受本藥品治療。

禁忌症: 對藥品任何成份過敏。過去使用 ACEI 或 ARB 曾有血管性水腫病史。併用 ACEI；禁止在使用 ACEI 的36 小時內轉換至本藥物，或在使用本藥物的36 小時內轉換至ACEI。遺傳性血管性水腫。同時併用aliskiren 的糖尿病患者。

警語及副作用: 胎兒毒性: 如果發現懷孕，應儘速停用本藥品，作用於腎素 - 血管收縮素系統的藥物會傷害發育中的胎兒，甚至導致胎兒死亡。不良反應包含血管性水腫、低血壓、腎功能不全以及高血鉀。血管性水腫: 若發生血管性水腫，請立即停用本藥品，提供適當治療，並監測呼吸道受阻的情形。日後不得再次給予。如果患者過去使用 ACEI 或 ARB 治療曾有相關血管性水腫病史或是有遺傳性血管性水腫，則不得使用本藥品。低血壓: 會使血壓下降，也可能造成有症狀的低血壓。腎素 - 血管收縮素系統活化的患者，例如體液及/或鹽分流失 (如接受高劑量利尿劑治療) 的患者，其風險更高。腎功能不全: 某些患者接受治療後，腎功能可能會下降，請密切監測血清肌酸酐，若患者發生具臨床意義的腎功能降低，應調降劑量或中斷 ENTRESTO®。本藥品用於雙側或單側腎動脈狹窄患者時，可能會增加血中尿素和血清肌酸酐濃度。應監測患者的腎功能。高血鉀: 本藥可能會發生高血鉀，應定期監測血清鉀離子濃度並適當治療，尤其是對於有重度腎功能不全、糖尿病、低醛固酮症或接受高鉀含量膳食等高血鉀風險因子的患者。

交互作用: 禁止與 ACEI併用。避免併用ARB。腎功能不全(eGFR <60 mL/min/1.73 m2) 患者應避免併用 aliskiren。併用鉀離子保留利尿劑、鉀離子補充劑或含鉀的代鹽須留意血鉀升高。併用NSAIDs 以及COX-2 抑制劑需應定期監測腎功能。併用鋰鹽時，應監測血清鋰濃度。

詳細資訊請參閱完整仿單以及衛生福利部核准之產品說明 (https://mcp.fda.gov.tw/im_detail_1/%E8%A1%9B%E9%83%A8%E8%97%A5%E8%BC%B8%E5%AD%97%E7%AC%AC026672%E8%99%9F)

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詳細資料處方僅索
使用前請詳閱說明書警語與注意事項
僅限專業醫療人士參閱

TW2302014545

中華民國血脂及動脈硬化學會 112 年會員大會暨
第二十二屆台北國際血管分子生物學研討會

The Annual Scientific Meeting of Taiwan Society of Lipids & Atherosclerosis 2023 and
The 22nd Taipei International Vascular Biology Symposium