中華民國血脂及動脈硬化學會

心臟血管疾病治療學術研討會
(紀念 姜必寧教授學術研討會)
TREATMENT OF CARDIOVASCULAR DISEASES - 2022

Dec. 10th 2022 (sat.)

臺北榮民總醫院致德樓第二會議室

主辦單位：財團法人心臟醫學研究發展基金會 | 陽明交通大學心臟血管疾病研究中心 | 中華民國血脂及動脈硬化學會 | 海峽循環醫學雜誌
協辦單位：輝瑞大藥廠股份有限公司
認證學分：

Welcome Message

林幸榮
心臟醫學研究發展基金會 董事長
國立陽明交通大學 臨床醫學研究所教授
臺北醫學大學 董事兼講座教授
臺北榮民總醫院 顧問兼教授級醫師

歡迎和感謝各位來參加為感念姜必寧教授舉辦的「2022 心臟血管疾病治療學術研討會」。敬愛的姜老師離開了，我們感到萬分的不捨。姜老師的一生在為人處事，臨床診療，研究與教學各方面都是我們景仰和努力學習的最佳典範。姜老師終身為鼓勵教學研究，推動學術交流，培育人才，不遺餘力，先後創設幾個單位來達成這些重要的使命。

1982 年，中央研究院生物醫學科學研究所，為貫徹「引導、聯繫、協助及獎勵國內基礎生物醫學科學以及臨床醫學之研究」，成立「榮民總醫院臨床醫學研究中心」，姜必寧教授為中心主任，結合中研院與臺北榮總臨床部科、醫研部及國立陽明醫學院之人力、設備及資源，初期以心臟血管疾病為主要研究課題，後來擴及其他疾病領域研究。該中心首創「住院醫師研究員」制度，讓年輕住院醫師有機會學習從事研究工作，奠定其後研究生涯的基礎，擇優晉升主治醫師並擔任醫學院教職，先後有十餘位住院醫師接受這種嚴格訓練，當中有幾位繼續赴國外深造，取得博士學位，個人林幸榮有幸為其中一員，感謝洪傳岳教授、魏耀揮教授及錢煦院士的指導與姜老師的栽培。

1985 年，以臺北榮總臨床醫學研究中心為根基，姜教授於國立陽明醫學院設立「臨床醫學研究所博士班」，姜老師擔任第一任所長，洪傳岳教授和我林幸榮為創所四位教授之二，該所充分發揮培養醫師科學家，以臨床疾病為導向從事轉譯醫學研究，造就卓越臨床醫學研究與教學人才搖籃的功能，迄今已有數百位臨床醫師獲得博士學位，包括今天在座好多位教授都是臨醫所的博士畢業生，已成為醫學中心研究和醫學院師資的主力。

1994 年 6 月，為提升血脂異常及動脈硬化疾病的研究、預防與治療，推動國際合作和學術交流，姜必寧教授發起成立「中華民國血脂及動脈硬化學會」，擔任創會首屆理事長，林幸榮為首屆秘書長及第四屆理事長，洪傳岳教授、陳肇文教授、殷偉賢教授、黃柏勳教授分別為第二屆、第五屆、第六屆及第十屆理事長。該學會為國際動脈硬化學會及歐洲動脈硬化學會的國家會員，積極參與國際學術活動，並成功地主辦 1998 年第一屆和 2019 年第 12 屆亞太動

脈硬化暨血管病大會，及 2002 年第五屆國際脂肪酸大會，大幅提升臺灣的國際地位及學術水平。

1994 年 11 月，為鼓勵及贊助醫師從事心臟醫學相關研究，進行臨床試驗，出國進修、研習，出席國際會議，發表學術論文，及舉辦學術活動等，姜必寧教授創立了「財團法人心臟醫學研究發展基金會」，擔任創會首任董事長，林幸榮為首任秘書長及第二任董事長，陳雲亮教授為第二任秘書長，積極募款，提供資源，充分支援尖端學術研究，發表卓越研究論文，推動國際學術交流，成績斐然。同時，為獎勵傑出心臟論文發表，2011 年，基金會設立「姜必寧獎 - 傑出青年心臟論文」，每年遴選海峽兩岸年輕醫師優秀心臟學術創作，提升研究水準，效果顯著。

萬分感謝 姜老師終身對於學生後輩的教導、愛護與提攜，對於支持學術研究，推動學術交流，提升醫學教育品質，作育英才，提高學術論文水準，具有重大的貢獻，功在社會、國家。

哲人日已遠、典型在夙昔
- 紀念姜必寧教授

黃柏勳
中華民國血脂及動脈硬化學會理事長
國立陽明交通大學心臟血管疾病研究中心主任

在歷經新冠肺炎疫情肆虐三年的時間國門逐步開放之際，本人謹代表學會歡迎各位先進前來參加由中華民國血脂及動脈硬化學會，財團法人心臟醫學研究發展基金會、國立陽明交通大學心臟血管疾病研究中心與海峽兩岸雜誌，一同舉辦的「**2022 心臟血管疾病治療學術研討會 - 紀念 姜必寧教授學術研討會**」。

2022 年九月，是個令人難過不捨的秋天，我們敬仰的學會創會理事長與財團法人心臟基金會創會董事長姜必寧教授於今年九月二十一日與世長辭。我們感念姜必寧教授對於心臟學界的長期付出與巨大貢獻，特別舉辦這場紀念演講會，藉由聆聽國內各領域專家講述目前心臟血管疾病治療最新進展的學術研討會，來紀念我們最尊敬的老師 - 姜必寧 教授。

姜教授於在公職生涯退休之後，念茲在茲一心掛念如何推動心臟醫學研究，因此在 1994 年創立了財團法人心臟基金會，更於 2011 年於財團法人心臟基金會設立姜必寧獎，其心念在念不遺餘力地提攜後進，姜必寧獎設立主旨在於鼓勵青年研究者創作基礎與臨床心臟血管學有關病因，預防及治療之研究論文，尤其是針對華人心血管疾病領域之研究，獎項頒予具有傑出科學及醫學研究成就者，鼓勵其對心臟血管疾病的病因及治療研究之貢獻，到今年 2022 年已順利頒發第十二屆姜必寧獎。在這場學術會議，我們共邀請了七位「姜必寧獎」與「姜必寧優秀論文獎」歷年的得獎者，前來分享他們得獎的論文與最新的臨床與基礎研究。希望與會聽眾都能從中有新的學習與收穫，感受姜必寧教授鼓勵年輕醫師投入學術研究的用心，鼓勵未來能有更多的青年研究者，前仆後繼持續進行心血管疾病領域的研究。

傳承姜必寧教授誨人不倦精神與真知灼見的眼光，我們都知道未來仍會還有更多的挑戰，現在正是繼承姜必寧教授「承先啟後」之精神的重要時刻，期盼能在前輩與後繼的同心協力之下，努力於各項研究與教育活動之中，為台灣心臟血管疾病的治療與控制去創造更好的環境，

培育更多的人才。在已故創會會長姜必寧教授與歷屆理事長的帶領，以及全體同仁的支持與協力下，我們創造了無數亮眼的成績。回憶起姜必寧教授曾表達過，看到台灣對於血管硬化控制及治療能有現今的成就，以及擁有許多後繼持續地進行心血管疾病的研究，是他最大的安慰。這亦達成了當初他創辦學會與設立姜必寧獎之目的，能後繼有人持續地進行心臟血管疾病的研究，以嘉惠病患。

再次代表學會深深感謝姜必寧教授無私卓見的重大貢獻！

亦師亦友四十年：紀念姜必寧董事長

洪傳岳
台北醫學大學講座教授
萬芳醫院顧問醫師

1982 年，我以教育部公費留學生的身份，在英國倫敦大學取得博士學位，即將回國服務之前，寫了一封信給姜董事長，表達希望在臺北榮總工作的意願。當時他是臺北榮民總醫院的心臟科主任, 在那之前, 我不曾在榮總工作，也沒有請託任何人向他推薦。董事長很快就回給我一封歡迎的信，不僅安排我擔任榮總主治醫師，任命我為陽明醫學院內科副教授，還指派我在新成立的臨床醫學研究中心擔任他的副手。這種知遇之恩，提拔之情，開始了我師事他門下四十年的歲月。

董事長除了學養豐富，醫術精深，值得效法外，我從他那裡學了許多做人做事的道理。他是儒醫風範，態度謙和，既不在人前疾言厲色，也不在人後閒話是非。他教我在批閱公文時，看到屬下提出的方案難以執行時，要先和提案人當面溝通，不要驟然批駁。對此教誨我印象深刻，在後來的行政工作中，受益良多。

董事長人文素養豐富，特別熱愛中國古典文學。公餘閒暇時，我常和他討論詩詞名句或藝文盛事。有時我們也會互贈詩文，可謂以文會友，忘年之交。三十年前(1992 年)，我陪董事長第一次到大陸醫學交流，隨後又陪他和師母到杭州，與他的家人見面，他們並到雙親墳上上香。這是董事長年少告別父母，離家數十年後，首次回鄉掃墓，意義自是非凡。我很榮幸是唯一陪著他，走這趟從臺北回鄉之路的人。

我醫學生涯中的許多重要階段，董事長都持續給我協助和指導。二十年前 (2001 年)，我受邀到香港及大陸發展生物科技產業，若接受必須辭去榮民總醫院和陽明大學的職位，當時董事長已經退休，我特別向他請教是否該做這樣的選擇？他告訴我，如果他還年輕，他也會這樣做。聽了他的智者之言，我不再猶豫，毅然走向新的道路，這對我後續人生的發展，影響非常深遠。

我醫學院畢業不久，先父即不幸去世，家中亦無兄弟。四十年來，董事長既為我的師友，又如我的父兄。大限前不久，我到榮總探望他，當時他雖為病痛所苦，仍親切與我閒話家常。如今駕鶴西去，羽化登仙，回想多年和他相處時的吉光片影，猶歷歷在目。恩師今已身心安息，神靈永寧，弟子謹於思念中感佩哲人雖遠，典範長存。

精彩的人生—姜副院長

陳雲亮
臺北榮民總醫院健康管理中心主任
臺北榮民總醫院內科部心臟科主治醫師

姜副院長過世當天下午，北榮陳威明院長打電話給我，說媒體要訪問有關姜副院長的生平，但他不是很了解，所以請我代為回答。我整理後將姜副院長的事功，歸納成下列四點：

1. 曾任老總統蔣公醫療團隊，嚴前總統家淦及蔣經國總統的醫療小組召集人，是名符其實的三代御醫。
2. 七十年代開始，領導北榮心臟科至副院長退休，是北榮心臟科的祖師爺。任內對北榮醫療的改革創新及學術發展建立紮實的基礎。
3. 創立陽明大學臨床醫學研究所，數十年來培養醫學研究人才，達到醫療與研究合一。
4. 退休後籌設心臟醫學研究發展基金會，2011 年設立姜必寧獎-傑出青年心臟論文獎，扶植後輩。

副院長的豐功偉業，我們這一代的榮總人，大多耳熟能詳，不需我多言。以下就一些我所知道及與副院長共事多年的經驗，提供一些茶餘飯後的話題。

北榮早年也有研究單位，但是獨立的，與臨床醫療單位，並無太多的連結。副院長在內科部主任任內，知道北榮的醫療要走出去，與世界接軌才有前途。當時接納余南庚教授(註 1)的意見，推動醫療改革，在陽明大學創立臨床醫學研究所，結合一起，造就一代接一代的醫學研究人才。但副院長在內科部任內 7 年中，由於推動改革，與很多單位產生摩擦，加上副院長職缺的問題，造成他仕途上有所延宕。

姜副院長對我的行醫生涯，有很重要的影響及幫助。1982 年我因考取香港的醫師執照，離開北榮，但 1984 年又因其他因素回台，姜副院長不計前嫌，接受我回榮總，二個月後，更兼任加護病房副主任。1998 年副院長又幫忙推薦加入美國心臟學院 FACC。這些恩惠，我都點滴在心頭。

副院長早年留英，他知道醫生本來就應該像紳士般，有一定的格局。但全民健保後，台灣醫生的社會地位，每況愈下。所以副院長特別要求，有關心臟科的宴會，都要辦得很體面。記得有一年副院長生日，我在凱悅酒店的凱寓舉辦，凱寓當時在台北市是極高級且隱密的一個宴會場所。我因認識當時凱悅酒店的業主，豐隆集團在台灣的代表高徵榮先生，故得以用最低消費的半價舉辦。

基金會創辦 20 週年，副院長找我，要找全台最高級的場地，舉辦慶祝餐會。副院長屬意當時新開張的東方文華酒店。當時詢價最小一個宴會廳都要 30 萬，剛好我認識文華酒店的控股公司–香港怡和洋行在台灣的大班張樑先生，經過他的協助，得以用每位 2,500 元的餐費，在 5 樓的法國餐廳，隆重舉辦，副院長非常滿意。

副院長在擔任先總統經國先生醫療召集人期間，整整有八年沒有出國門一步。因為經國先生健康問題，全年 24 小時待命，勞心勞力。雖然說權傾一時，但完全沒有生活品質。後來經國先生突然發病逝世，有些家屬不諒解。副院長當時匆忙赴美，在同學家中住了一個月，讓事情平息後才回國。事後有次與蔣孝勇先生談起，孝勇先生亦認為副院長是委屈了。因為當年不是醫生想做什麼就可以做。而是病人願意做什麼，醫生才可以做。可見當時副院長的處境，為榮總背負了極大的重擔。(註 2)

副院長退休後，每年都會帶夫人去拉斯維加斯玩一週，看表演、吃美食、小賭怡情，副院長很享受這段日子。副院長一生勤奮，功成名就，更難得的是家庭美滿幸福，兩位女婿都是榮總骨科名醫，而副院長的外孫們，都是美國頂尖名校出身，在美國、日本及香港的國際大集團工作，甚有成就。

綜觀姜副院長的一生，可說是：活得精采。

註 1：余南庚教授時任北榮總顧問，1971 年美國心臟協會 AHA 主席。由於余教授沒有台灣的醫師執照，多年來在榮總看診，都是由我與副院長的秘書胡美玲小姐兩人做助理。

註 2：孝勇先生在他的著作「寧靜中的風雨」有提到，” 本人與孝勇家有深厚的友誼” P.15。

To Sir With Love
~化作春泥更護花~

閻紫宸
林口長庚分子影像轉譯研究中心主任
林口長庚紀念醫院核子醫學部主治醫師
長庚大學醫學系教授

和姜副院長結緣，完全是一個意外和緣分。想當初，剛剛踏入台北榮總，心臟科姜主任威名赫赫，除了學術和醫療專業掛帥，御醫的名頭，早已響徹天際。當實習醫師，有機會隨著查房，前面早就擠滿一堆身穿長袍和短袍的醫師，難得看到天威，一臉肅穆莊嚴，很慎重，很仔細的檢查病人狀況，我們想開口問一句話，都難上青天，深怕自己搞錯方向，只好閉緊嘴巴往邊靠。後來，因為工作的關係，副院長總會親自陪同自己很重要的病人來科裡檢查。對於不同領域的專業，但凡牽涉到心臟專業，副院長總是站在病人理解的知識水平，向病人解釋得非常「平民語言」，和過往在醫學院教導我們的方式截然不同。我 1988 年回母校就讀臨床醫學研究所，第一任所長就是姜副院長。猶記得他對我的口試，居然是「家人是否全力支持妳來唸書？帶職進修薪資會減少很多，對妳家生活是否有影響？要珍惜唸研究所的時光，努力學習等...。」，態度和我在醫學院當學生，或是過去在醫院當醫生的印象截然不同，完全像位貼心的家長般，溫度滿滿。

1977 年我決定離開台北榮總，去姜副院長辦公室向他報告。他不但沒有要我考慮留下來，反而鼓勵我有機會的話，努力去外面探索自己是否還有其他的可能性。後來，我決定去林口長庚醫院，姜副院長告訴我要有心理準備，因為一來，我一直待在公部門，長庚醫院是私人醫院，其次，我已經 40 歲了，要從新開始無論是打基礎，或是適應新環境，都不是一件容易的事情。但是，他再次鼓勵我要勇敢，因為身為醫師，服務的對象就是病人，而對病人的態度，應該要在哪裡都是一樣的。同時，如果真遇到什麼困難，可以抽空和他聊聊。我因為姜副院長的鼓勵，在長庚醫院近 30 年，一直努力不辜負他的期待。

「化做春泥更護花」是副院長告訴我他很喜歡的一句話。我常常思索，覺得副院長無論是在面對小至夫妻感情、師生關係、醫病關係，大到對國家的愛，完完全全實踐出來，讓我更加體會為什麼他很喜歡這句話。現在，副院長真的化作春泥，要用他的生命，去守護他這一輩子一直都在守護的東西，他的身教，是我們做學生一輩子的典範，副院長的點點滴滴，都是我們一生要學習的目標，他是我此生少數打從心底，非常尊重的長輩。

我永遠懷念的姜副院長

魏耀揮
國立陽明交通大學臨床醫學研究所
彰化基督教醫院粒線體醫學暨自由基研究院

我於 1981 年秋從美國回台進入國立陽明醫學院醫學系生化學科任教，不久接到台北榮民總醫院心臟內科主任姜必寧教授的電話，邀請我到他主持的心臟內科研究討論會議演講，姜教授聽完我關於牛心臟肌粒線體細胞色素氧化酶(cytochrome c oxidase)的演講後，告訴我有一些臨床藥物有心臟毒性(cardiotoxicity)的副作用，但還不知道原因，問我是否有興趣做些相關研究。我當時已經做了一些 fungal toxins (包括 PR toxin 和 Ochratoxin 等)對粒線體功能影響的研究，並已發表一篇論文在 Archives of Biochemistry and Biophysics 這本生物化學的主流期刊上，因此對姜教授提出的問題頗有興趣，就請他建議幾個有副作用的心臟科臨床用藥，其中一個是 propranolol，當時剛從英國進修回到台北榮總心臟科服務的洪傳岳醫師也提供我一些 propranolol 藥理學知識和相關的文獻。我回到陽明醫學院實驗室就利用分離的大白鼠粒線體測量不同濃度的 propranolol 對呼吸鏈酵素活性及氧化磷酸化功能的影響，發現該藥物對粒線體結構的損傷和功能的抑制作用有劑量及時間相關性，我立刻撰寫論文送到 Biochemical Pharmacology，很快就被接受刊登。

姜教授對於我從事醫學研究的積極態度和良好績效留下了好印象，就邀請我參與他和余南庚院士為中研院設置在台北榮總的臨床研究中心(Clinical research center)之研究計畫，這就開啟了我和台北榮總許多臨床醫師長期合作研究的大門，讓我有機會成為陽明醫學院臨床醫學研究所創所的 4 位專任教授之一，我每年開授細胞及分子生物學課程，並親自帶研究生在我的實驗室學習生化及分子生物學相關技術。由於我在臨床醫學研究所授課和帶學生從事實驗，幾乎每年都有研究生選擇進入我的 Lab 進行博士論文實驗，透過與學生討論臨床問題而讓我對一些疾病有更進一步的認識，同時也帶動了臨床與基礎醫學合作的風氣，這也奠定了我後來與台北榮總及其他醫學中心臨床醫師長期合作從事粒線體醫學研究的基礎。我要特別感謝姜教授在我學術研究生涯發展初期的鼓勵與提攜，而且給予我充裕的研究經費，使我能夠在 1985 年順利升等為教授。

在于俊教授擔任陽明醫學院院長 6 年期間，我除了擔任醫學系生化學科主任，也因為野百合學生運動而受于院長邀請擔任訓導長(後來改名為學務長)，當時姜必寧教授是醫學系系主任，我們曾一起處理與學生事務相關的業務，由於他的開明作風與對我的信任和願意聽取我的意見，在學運期間我們得以維持陽明校園的安寧與學生安定的學習環境，讓我在學運結束後得以在 1991 年 8 月辭去行政職務，而專注於教學與研究工作，這之後的 10 年我在姜副院長支持下

全心投入粒線體醫學研究，也是學術研究成果最為豐碩的一段時期，我指導了將近 20 名臨床醫學研究所的醫師完成博士論文，並在 1997-2000 年期間受當時國科會生物處陳慶三處長聘為「醫學生化」學門召集人，更在 2001 年 8 月獲國科會主任委員魏哲和教授邀請擔任生物處處長，我因而有機會在過去二十餘年來參與建設良好研發環境以支持學術研究和國家科技發展。

姜教授在擔任台北榮總內科部部主任期間，積極鼓勵醫師出國進修或進入陽明醫學院臨床醫學研究所修讀博士學位，此一政策也促使外科部要求各科每年薦送年輕醫師進修，一時蔚為風氣；姜教授對醫學研究的重視與支持使他在部主任和副院長任內為台北榮總、台中總及高雄榮總培育了許多優秀的醫師科學家，這對三家榮民總醫院的研究風氣和研究能量的提升有很顯著的貢獻。

姜教授除了是一位有國際地位的優秀心臟科醫師和著作等身的心臟醫學知名學者，也是一位富有教育熱忱的好老師，他在擔任陽明醫學院醫學系系主任期間，每年五月下旬都會為實習和見習醫師的臨床技能訓練特別邀請台北榮總各科部主任召開座談會，並囑咐與會的資深醫師和主管重視教學。姜教授很樂於提攜後進，受他栽培的臨床醫師不計其數，而我是極少數受到他照顧與提攜的基礎醫學研究者，即使在他從台北榮總退休後，我仍每年收到他精心製作的賀年卡，姜副院長剛退休那幾年偕師母出國旅行和搭乘郵輪 Love boat 的遊記與美麗照片還珍藏在我的書房裡，他們夫婦幸福美滿的一生留給我學習的榜樣和無限的懷念。

TIME	TOPIC	SPEAKER	MODERATOR
13:30–14:00	報 到		
14:00–14:05	Opening		林幸榮 教授
14:05–14:10	紀念 姜必寧教授致詞		洪傳岳 教授
14:10–14:15	紀念 姜必寧教授致詞		陳雲亮 教授
14:15–14:20	紀念 姜必寧教授致詞		陳適安 教授
SECTION 1			
14:20–14:32	Management of Atrial Fibrillation - 2022 (第六屆姜必寧獎)	趙子凡 醫師	陳適安 教授
14:32–14:35	Discussion		
14:35–14:47	Complex PCI in Taiwan - 2022	盧澤民 教授	陳雲亮 教授
14:47–14:50	Discussion		
14:50–15:02	2022 Taiwan Lipid Guidelines for Primary Prevention (第一屆姜必寧優秀論文獎)	黃柏勳 教授	洪傳岳 教授
15:02–15:05	Discussion		
15:05–15:17	Arrhythmia ablation in Taiwan - 2022	羅力瑋 教授	林彥璋 教授
15:17–15:20	Discussion		
15:20–15:32	TAVI in Taiwan - 2022	陳嬰華 教授	林幸榮 教授
15:32–15:35	Discussion		
15:35–15:47	Management of Hypertension in Taiwan - 2022 (第三屆姜必寧獎)	鄭浩民 教授	陳震寰 教授
15:47–15:50	Discussion		

TIME	TOPIC	SPEAKER	MODERATOR
15:50–16:10	Coffee Break		
SECTION 2			
16:10–16:22	Transcatheter Mitral Valve Repair in Taiwan - 2022	宋思賢 教授	殷偉賢 教授
16:22–16:25	Discussion		
16:25–16:37	Artificial Intelligence Aids Cardiac Image Quality Assessment for Improving Precision in Strain Measurements (第十屆姜必寧獎)	黃冠智 醫師	陳肇文 教授
16:37–16:40	Discussion		
16:40–16:52	Reprogram Quiescent Cardiomyocytes into Pacemaker Cells (第五屆姜必寧獎)	胡瑜峰 教授	黃柏勳 教授
16:52–16:55	Discussion		
16:55–17:07	Flow-dependent Endothelial Regulation and Atherogenesis (第十二屆姜必寧獎)	葉志凡 醫師	楊鎧鍵 教授
17:07–17:10	Discussion		
17:10–17:22	Identifying Novel Biomarkers for Cardiovascular Disease Risk Prediction (第九屆姜必寧獎)	徐千彝 醫師	呂信邦 教授
17:22–17:25	Discussion		
17:25–17:30	Closing		陳肇文教授

中華民國血脂及動脈硬化學會

TREATMENT OF CARDIOVASCULAR DISEASES - 2022

心臟血管疾病治療學術研討會

(紀念 姜必寧教授學術研討會)

主辦單位：財團法人心臟醫學研究發展基金會 | 陽明交通大學心臟血管疾病研究中心
中華民國血脂及動脈硬化學會 | 海峽循環醫學雜誌

協辦單位：輝瑞藥廠股份有限公司

趙子凡 醫師

- Attending Physician, Division of Cardiology, Department of Medicine, Taipei Veterans General Hospital, Taipei, Taiwan
- Associate Professor, National Yang-Ming University, Taipei, Taiwan
- Chair, Practical Guideline subcommittee, Asia-Pacific Heart Rhythm Society
- Section Editor of “Thrombosis and Haemostasis”
- Senior Editor of “International Journal of Clinical Practice”
- Editorial Board of “JAHA” and “Clinical Cardiology”
- ESC annual congress – Abstract Grader (2018-2022)

Awards

- 2010 APHRS (South Korea) Best Paper Award (clinical), 2nd prize
- 2011 Taiwan Heart Rhythm Society, Young Investigator Award (YIA), 1st prize
- 2015 CardioRhythm 2015 (Hong Kong), Best Paper Award
- 2015 Outstanding paper award of Taipei Veterans General Hospital
- 2015 APHRS (Melbourne, Australia) Young Investigator Award (YIA), clinical category
- 2016 Young Investigator High Impact Factor Award of Department of Medicine, Taipei Veterans General Hospital
- 2016 European Society of Cardiology (ESC) annual meeting – Moderated posters award
- 2016 姜必寧傑出青年心臟論文獎
- 2017 European Society of Cardiology (ESC) annual meeting – Best poster presentation
- 2017 第 55 屆中華民國十大傑出青年(醫學研究類)
- 2017 Outstanding paper award of Taipei Veterans General Hospital
- 2018 Outstanding Investigator Award of Department of Medicine, Taipei Veterans General Hospital
- 2018 Investigator High Impact Factor Award of Department of Medicine, Taipei Veterans General Hospital
- 2019 Outstanding Investigator Award of Department of Medicine, Taipei Veterans General Hospital
- 2019 Investigator High Impact Factor Award of Department of Medicine, Taipei Veterans General Hospital
- 2019 Outstanding paper award of Taipei Veterans General Hospital
- 2020 Outstanding paper award of Taipei Veterans General Hospital

Management of Atrial Fibrillation - 2022

趙子凡 醫師

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. However, it is a challenge to prevent stroke in some difficult scenarios, such as the elderly, patients with history of intracranial hemorrhage, major bleeding or cancers. More and more data suggested that OACs should still be considered even for very elderly AF patients. Multiple factors, such as comorbidities, renal functions and bleeding risk should be taken into consideration to optimize AF managements. Also, some new drugs, such as factor XI inhibitors, are intriguing targets for the next generation of anticoagulants which may further change the practice of stroke prevention in AF. Furthermore, how to detect AF via AF screening before patients experience ischemic stroke is an important issue which has drawn much attention. Results of ongoing randomized trials will give us the answer.

盧澤民 教授

Present Position

- 2012- Present Associate professor of Medicine, National Yang-Ming University,
  School of Medicine, Taipei, Taiwan.
- 2002- Present Attending physician in Division of Cardiology, Taipei Veterans General
  Hospital, Taipei, Taiwan

Education

- 1981 - 1984 Provincial Chai-Yi High School
- 1984 - 1991 M.D., National Yang-Ming University
- 2006 – 2011 Ph.D degree at Institute of Clinical Medicine, National Yang-Ming Medical University

Post-Graduate Service

- 1991 - 1993 Military service in Chinese Air-Force
- 1993 - 1995 Resident physician, division of Medicine, Chai-Yi Veterans Hospital, Chai-Yi, Taiwan
- 1995 – 1998 Resident physician, Department of Medicine, Taipei Veterans General Hospital, Taipei, Taiwan
- 1998 – 2002 Fellow in Division of Cardiology, Taipei Veterans General Hospital, Taipei, Taiwan
- 2002 - Present Attending physician in Division of Cardiology, Taipei Veterans General Hospital, Taipei, Taiwan
- 2016 – Present Chief, Healthcare & Services, Veterans General Hospital, Taipei, Taiwan
- 2014 – Present Fellow of American College of Cardiology.

Sub-special interest

Percutaneous coronary intervention, vascular biology.

Professional Societies and Organizations

- Member, Taiwan Society of Cardiology, Taiwan
- Member, Taiwan Society of Internal Medicine, Taiwan
- Member, Taiwan Society of Interventional Cardiology, Taiwan

Complex PCI in Taiwan

盧澤民 教授

After the first percutaneous coronary intervention (PCI) was performed in September 1977 by Andreas Grüntzig, the first coronary angioplasty was performed at Taipei Veterans General Hospital in 1982. Since then, there were tremendous progress in PCI, including the introduction of bare metal stent, which reduced the risk of acute complications and improved procedure reproducibility after POBA. It was the introduction of drug-eluting stents (DES) at the beginning of this century, however, that allowed PCI to become one of the most frequently performed therapeutic interventions in medicine, primarily by addressing the issue of in-stent restenosis. Then we have the new-generation DES and even bioresorbable stent later. Now PCI with implantation of DES has become one of the standard treatments with complex coronary artery disease, including acute coronary syndrome, triple vessel disease, bifurcation lesions, chronic total occlusion, or even left main disease. Moreover, for heavily calcified lesions, we have rotational atherectomy, cutting balloon, and intravascular lithotripsy in the near future. In contrast, the advancement of intravascular imaings, including intravascular ultrasound (IVUS) and optical computer tomography (OCT), functional modality (FFR/iFR, etc), have assist us to select optimal patient who will benefit from PCI and do a optical PCI. These progresses in Taiwan will be presented in this speech.

黃柏勳 教授

Position Title

- Professor, Institute of Clinical Medicine, National Yang Ming Chiao Tung University & Chief, Cardiovascular Research Center, National Yang Ming Chiao Tung University.
- Chief, Internal Medicine, Critical Care Medicine Department, Taipei Veterans General Hospital.
- President, Taiwan Society of Lipid and Atherosclerosis.

Education/Training

- 1992-1999 M.D., National Yang Ming Chiao Tung University (Medicine)
- 2007-2010 Ph.D., Institute of Clinical Medicine, National Yang Ming Chiao Tung University (Basic Research & Vascular Biology)

Research Interests

Dr. Huang is interested in clinical and basic studies of vascular biology, including endothelial function, atherosclerosis, kidney disease, and endothelial progenitor cells (EPCs). Dr. Huang has published more than 260 original articles in the international SCI journals.

Selected Publications (*marks the corresponding author)

- **Huang PH**, Chen CY, Lin CP, Wang CH, Tsai HY, Lo WY, Leu HB, Chen JW, Lin SJ, *Chu PH. Deletion of FHL2 Gene Impaired Ischemia-Induced Blood Flow Recovery by Modulating Circulating Proangiogenic Cells. Arterioscler Thromb Vasc Biol. 2013;33:709-17. **(IF: 10.51)**
- Tsai SH, ***Huang PH**, Peng YJ, Chang WC, Tsai HY, Leu HB, Chen JW, Lin SJ. Zoledronate attenuates angiotensin II-induced abdominal aortic aneurysm through inactivation of Rho/ROCK dependent JNK and NF-κB pathway. Cardiovasc Res. 2013; 100:511-9. **(IF: 10.78)**
- Li SY, ***Huang PH**, Yang AH, Tarng DC, Yang WC, Lin CC, Chen JW, Schmid-Schönbein G, *Lin SJ. Matrix metalloproteinase-9 deficiency attenuates diabetic nephropathy by modulation of podocyte functions and dedifferentiation. Kidney Int. 2014;86:358-69. **(IF: 18.99)**
- Li SY, ***Huang PH**, Tarng DC, Lin TP, Yang WC, Chang YH, Yang AH, Lin CC, Yang MH, Chen JW, Schmid-Schönbein GW, Chien S, Chu PH, Lin SJ. Four-and-A-Half LIM Protein 2 is a Co-Activator of Wnt Signaling in Diabetic Kidney Disease. J Am Soc Nephrol 2015; 26:3072-84. **(IF: 10.12)**
- Wu CC, Hsieh MY, Hung SC, Kuo KL, Tsai TH, Lai CL, Chen JW, Lin SJ, ***Huang PH**, *Tarng DC. Serum indoxyl sulfate associates with post-angioplasty thrombosis of dialysis grafts. J Am Soc Nephrol. 2016;27:1254-64. **(IF: 10.12)**
- Hung SC, Kuo KL, Huang HL, Lin CC, Tsai TH, Wang CH, Chen JW, Lin SJ, ***Huang PH**, *Tarng DC. Indoxyl sulfate suppresses endothelial progenitor cell-mediated neovascularization via IL-10/STAT3/VEGF signaling pathway. Kidney Int. 2016;89:574-85. **(IF: 18.99)**
- Shang F, Wang SC, Hsu CY, Miao Y, Martin M, Yin Y, Wu CC, Wang YT, Wu G, Chien S, Huang HD, Tarng DC, Shiu YT, Cheung AK, ***Huang PH**, *Chen Z, *Shyy JY. MicroRNA-92a Mediates Endothelial Dysfunction in CKD. J Am Soc Nephrol. 2017;28:3251-3261. **(IF: 10.12)**
- Shang F, Wang SC, Gongol B, Han SY, Cho Y, Schiavon CR, Chen L, Xing Y, Zhao Y, Ning M, Guo X, He F, Lei Y, Wang L, Manor U, Marin T, Chou KT, He M, ***Huang PH**, Shyy JY*, Malhotra A*. Obstructive Sleep Apnea-induced Endothelial Dysfunction is Mediated by miR-210. Am J Respir Crit Care Med. 2022 Oct 3. doi: 10.1164/rccm.202202-0394OC. Online ahead of print. **(IF: 30.53)**

2022 Taiwan Lipid Guidelines for Primary Prevention

黃柏勳 教授

Elevated circulating low-density lipoprotein cholesterol (LDL-C) is a major risk factor of atherosclerotic cardiovascular disease (ASCVD). Early control of LDL-C to prevent ASCVD later in life is essential. The Taiwan Society of Lipids and Atherosclerosis, in association with the other seven societies, developed this new lipid guideline focusing on subjects without clinically significant ASCVD. In this guideline for primary prevention, the recommended LDL-C target is based on risk stratification. A healthy lifestyle with recommendations for foods, dietary supplements, and alcohol drinking are described. Pharmacological therapies for LDL-C reduction are recommended. The aim of this guideline is to decrease the risk of ASCVD through adequate control of dyslipidemia in Taiwan. Here, we will briefly introduce this guideline in this lecture.

羅力瑋 教授

Current Position

- Director, Heart Rhythm Center, Division of Cardiology, Internal Medicine Department, Taipei Veterans General Hospital, Taipei, Taiwan
- Attending Physician, Division of Cardiology, Internal Medicine Department, Taipei Veterans General Hospital, Taipei, Taiwan
- Professor, Faculty of Medicine, School of Medicine, National Yang Ming Chiao Tung University, Taipei, Taiwan

Education

- Graduated from Faculty of Medicine, National Yang Ming Chiao Tung University
- Graduated from Institute of Clinical Medicine, School of Medicine, National Yang Ming Chiao Tung University, the degree of Doctor of Philosophy.

Postdoctoral Training

- 2017-2020 Director, Hospitalist Ward, Hospitalist Medicine, Internal Medicine Department Taipei Veterans General Hospital, Taipei, Taiwan
- 2008-Present Attending Physician, Division of Cardiology, Internal Medicine Department Taipei Veterans General Hospital, Taipei, Taiwan
- 2011-2012 Attending Physician, Division of General Medicine, Internal Medicine Department, Taipei Veterans General Hospital, Taipei, Taiwan
- 2006-2008 Fellowship, Cardiology, Electrophysiology, Internal Medicine Department Taipei Veterans General Hospital, Taipei, Taiwan
- 2004-2006 Chief Resident, Division of Cardiology, Internal Medicine Department Taipei Veterans General Hospital, Taipei, Taiwan
- 2001-2004 Residency, Internal Medicine Department, Taipei Veterans General Hospital Taipei, Taiwan
- 1999-2001 Residency, Internal Medicine Department, Chiayi Veterans General Hospital Chiayi, Taiwan

Honors and Awards

- Young Investigator Award, Taiwan Society of Cardiology, 2009.
- Best poster award, Basic section, 2nd Asian Pacific Heart Rhythm Society, 2009
- Best poster award, Basic section, 3rd Asian Pacific Heart Rhythm Society, 2010
- Best oral presentation, Basic science, 44th Taiwan Society of Cardiology Annual Scientific Meeting, 2014
- First Prize, Doctor JCS, Asian Championship, The 83rd Annual Scientific Meeting of the Japanese Circulation Society, JCS, 2019

Arrhythmia Ablation in Taiwan – 2022

羅力瑋 教授

Catheter ablation, particularly radiofrequency ablation has revolutionized the treatment for tachyarrhythmias. It has evolved rapidly over the years and has proven to be a first-line therapy for many tachycardias in most of the patients having recurrent symptoms, which limit their productivity and hinder their lifestyle.

The use of catheter ablation was first introduced in the late 1960s and it was designed first for recording, where the surgical treatment of cardiac arrhythmia was the main concept. In 1967, the concept of induction of cardiac arrhythmia was first introduced through programmed electrical stimulation. In the late 1970s, Wellen et al. were able to perform programmed electrical stimulation, and record the activation sequences from more than one recording catheter, followed by the development of both surgical ablation and intracardiac recordings. In 1981, the concept of the transvenous catheter was first defined when a patient that was undergoing an electrophysiological recording following defibrillation, where a high-voltage discharge was emitted when the defibrillator electrode hit the catheter electrode at His. In the 1990s, radiofrequency ablation replaced the direct current energy. Taiwan was able to obtain this technology and the first radiofrequency catheter ablation was successfully finished in Taiwan Veterans General Hospital on Dec 30th, 1987 and it was the first case in Asia Pacific region.

Ever since then, radiofrequency ablation had a rapid growing speed in the treatment of paroxysmal supraventricular tachycardia. However, challenging problems happened when dealing with the ablation on atrial fibrillation. Pulmonary vein isolation had been proposed to be an effective treatment strategy for atrial fibrillation and were firstly proposed by Prof. Shih-Ann Chen in Taiwan and Professor Michael Haissaguerre in France. In addition, the introduction of non-pulmonary vein triggers initiating atrial fibrillation had also been first identified in the world by the team from Taipei Veterans General Hospital. Later, it has been named as Taipei Approach in the field of atrial fibrillation ablation.

The ablation technique has been evolved rapidly in the past 20 years from the single tip ablation to balloon-based ablation, cryoenergy ablation. The introduction of the high-density mapping and new energy platform also increased the long-term ablation success. The clinical and research abilities on arrhythmia ablation in Taiwan are always in an outstanding status and lead the world toward a better future in this field.

陳嬰華 教授

Present Position

- Professor of Medicine, National Yang-Ming Chiao-Tung University, Taipei, Taiwan, R.O.C.
- Attending physician, Division of Cardiology, Department of Medicine, Taipei Veterans General Hospital, Taiwan, R.O.C.

Education

- 1981-1988 M.D. National Yang-Ming University School of Medicine
- 1999-2003 Ph.D. Institute of Clinical Medicine, National Yang-Ming University School

Post Graduate Education

- 1986-1988 Intern, Taipei Veterans General Hospital
- 1988-1990 Resident physician, Department of Medicine, Veterans Hospital-Puli
- 1990-1993 Resident physician, Department of Medicine, Taipei Veterans General Hospital
- 1993-1997 Fellow in Cardiology, Department of Medicine, Taipei Veterans General Hospital
- 1997-present Attending physician, Division of Cardiology, Department of Medicine, Taipei Veterans General Hospital

Medical Appointment

- 1997-2004 Instructor of Medicine, National Yang-Ming University School of Medicine
- 2004-2012 Assistant professor of Medicine, National Yang-Ming University
- 2012-2017 Associate professor of Medicine, National Yang-Ming University
- 2017-present Professor of Medicine, National Yang-Ming University, Taipei, Taiwan, R.O.C.

Licensures And Certification

- 1988 Physician, R.O.C.
- 1989 Educational Committee for Foreign Medical Graduate (ECFMG) Basic science, Clinical science and English, passed
- 1993 Specialist, the Society of Internal Medicine, R.O.C.
- 1995 Specialist, the Taiwan Society of Cardiology, R.O.C.

Transcatheter Aortic Valve Implantation (TAVI) at Taipei Veterans General Hospital

陳嬰華 教授

The number of cases of aortic stenosis has risen along with the increasing elderly population around the world. Among people aged 75 years or older, 3.4% of them have severe aortic stenosis. If symptoms appear, the standard treatment is surgical aortic valve replacement. However, over 30% of patients are not able to undergo surgery due to their advanced age or combination of other diseases. Once the symptoms of severe aortic stenosis appear (chest pain, syncope and heart failure), the death rate for patients receiving medication and not undergoing surgery reaches up to 50% within one year. The five-year survival rate is almost 0%. Transcatheter aortic valve implantation (TAVI) is a less invasive approach which offers new alternative for those patients deemed inoperable or of high surgical risk.

Taipei Veterans General Hospital was the first hospital in Taiwan to perform TAVI procedure in 2010 and its heart team was the first team in Taiwan to receive IRB approval from the Department of Health to perform TAVI procedure. Professionals in the fields of cardiology, cardiac surgery, anesthesia, radiology and neurology have joined together to form the specialized TAVI team. Our team has pioneered non-intubated procedure with local anesthesia and use of the percutaneous vascular closure device in 2013 to minimize operative complications. The 3M principle ─ multidisciplinary, multimodality, minimalist approach ─ was applied successfully during procedures, establishing a model for interdisciplinary team cooperation.

We are the only hospital in Taiwan which is able to perform valve implantation via six different routes including: femoral artery, subclavian artery, aorta, apex, abdominal aorta and carotid artery. This gives patients with peripheral vascular disease more options and reduces the risk of major vascular complications. The electrical conduction system of the heart locates below the aortic valve. Therefore, a significant percentage of patients must have a permanent pacemaker implanted to treat their slow heart rate after TAVI. However, implantation of a permanent pacemaker not only extends the hospital stay, but also carries a risk of complications, and increases the likelihood of heart failure and repeated hospitalization of patients. With meticulous implantation technique and preprocedural assessment of membranous septum length to determine the optimal implant depth, only 2.4% of our patients required implantation of permanent pacemakers after the procedure, which is much lower than the implantation rates from other countries around the world (10% -26.3%).

The outstanding results of the Taipei Veterans General Hospital's TAVI team have been published in more than 20 research articles in leading journals, such as the European Heart Journal, the Journal of Thoracic and Cardiovascular Surgery, and the Annals of Thoracic Surgery. The team was invited to perform live demonstrations for Taiwan Society of Cardiology, Taiwan Society of Cardiovascular Interventions, and Asian Pacific Society of Cardiology.

鄭浩民 教授

- Director, Center for Evidence-based Medicine, Taipei Veterans General Hospital, Taipei, Taiwan
- Professor, Ph.D. Program of Interdisciplinary Medicine (PIM), National Yang Ming Chiao Tung University College of Medicine, Taipei, Taiwan
- Adjunct Professor, Institute of Public Health, National Yang Ming Chiao Tung University College of Medicine, Taipei, Taiwan
- Adjunct Professor, Institute of Health and Welfare Policy, National Yang Ming Chiao Tung University College of Medicine, Taipei, Taiwan
- Editor, JBI Evidence Synthesis
- Associate Editor, BMC Cardiovascular Disorders
- Associate Editor, Blood Pressure Monitoring
- Associate Editor, Systematic Reviews
- Section Editor, Current Hypertension Reviews
- Editorial Board Member, American Journal of Hypertension
- Editorial Board Member, Journal of clinical Hypertension
- 台灣實證醫學學會秘書長、台灣高血壓學會理事、台灣皮質醛酮症學會常務理事

Hao-min Cheng was graduated from Faculty of Health Science, The University of Adelaide, Australia and Faculty of Medicine, National Yang Ming Chiao Tung University, Taipei, Taiwan with the outstanding award among Graduate. He holds a doctorate degree in Medicine from University of Adelaide, Australia. He has been a cardiologist for more than 15 years with the sub-speciality of interventional cardiology and cardiovascular hemodynamics. As a professor in National Yang Ming Chiao Tung University, he has been granted the awards of excellence in Clinical and Internship Teaching numerous times. He is current the director of Division of Faculty Development, Taipei Veterans General Hospital and was the immediate past director of Centre for Evidence-based Medicine in Taipei Veterans General Hospital. His research has been focusing on cardiovascular hemodynamics, hypertension management, and evidence-based health care with more than 250 articles published in peer-reviewed journals and several patents in US, Japan, and Taiwan. Meanwhile, he is an editor in Systematic Reviews, BMC Cardiovascular Disorders, JBI evidence synthesis, Frontiers in Cardiovascular Medicine and has been involved in editorial and peer-review work of many international SCI listed journals. To achieve the goal of better patient care, he has developed the innovative techniques relating to cardiovascular hemodynamics and endeavoured to facilitate the technology transfer from research to industrialisation.

Management of Hypertension in Taiwan-2022

鄭浩民 教授

Hypertension is the most important modifiable cause of cardiovascular (CV) disease and all-cause mortality worldwide. Despite the positive correlations between blood pressure (BP) levels and later 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 the level of 140/90 mmHg in the past 30 years. The publication of both the SPRINT and STEP trials (comprising > 8,500 Caucasian/African and Chinese participants, respectively) provided evidence to shake this 140/90mmHgdogma. Another dogma regarding hypertension management is the dependence on office (or clinic) BP measurements. Although standardized office BP measurements have been widely recommended and adopted in large-scale CV outcome trials, the practice of office BP measurements has never been ideal in real-world practice. Home BP monitoring (HBPM) is easy to perform, more likely to be free of environmental and/or emotional stress, feasible to document long-term BP variations, of good reproducibility and reliability, and more correlated with hypertension-mediated organ damage (HMOD) and CV events, compared to routine office BP measurements. In the 2022 Taiwan Hypertension Guidelines of the Taiwan Society of Cardiology (TSOC) and the Taiwan Hypertension Society (THS), we break these two dogmas by recommending the definition of hypertension as _ 130/80 mmHg and a universal BP target of < 130/80 mmHg, based on standardized HBPM obtained according to the **722** protocol. The **722** protocol refers to duplicate BP readings taken per occasion (“2”), twice daily (“2”), over seven consecutive days (“7”). To facilitate implementation of the guidelines, a series of flowcharts encompassing assessment, adjustment, and HBPM-guided hypertension management are provided. Other key messages include that: 1) lifestyle modification, summarized as 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]) are recommended as first-line antihypertensive drugs; 3) initial combination therapy, preferably in a single-pill combination, is recommended for patients with BP> 20/10 mmHg above targets; 4) a target hierarchy (HBPM-HMOD ambulatory BP monitoring [ABPM]) should be considered to optimize hypertension management, which indicates reaching the HBPM target first and then keeping HMOD stable or regressed, otherwise ABPM can be arranged to guide treatment adjustment; and 5) renal denervation can be considered as an alternative BP lowering strategy after careful clinical and imaging evaluation.

宋思賢 教授

Present position

- Professor, Institute of Emergency and Critical Care Medicine, National Yang Ming Chiao Tung University
- Attending Physician, Division of Cardiology, Taipei Veterans General Hospital, Taiwan

Education

- 2011-2015 Department of Public Health, National Yang-Ming University, Taipei, Taiwan
- 1994-2001 National Yang-Ming University, Taipei, Taiwan

Clinical Interests

Heart failure, Structural heart intervention, Coronary intervention, Echocardiography

Experience

- 1999-2001 Intern, Veterans General Hospital, Taipei, Taiwan
- 2002-2005 Resident Physician, Department of Medicine, Veterans General Hospital, Taipei, Taiwan
- 2005-2009 Fellow in Cardiology, Veterans General Hospital, Taipei, Taiwan
- 2007-2008 Chief Resident in Internal Medicine, Veterans General Hospital, Taipei, Taiwan
- 2008-2008 Researcher, Graduate School of Medical Sciences, Kyushu University, Japan
- 2009-2010 Researcher, Graduate School of Medical Sciences, Chinese University of Hong Kong
- 2014-2016 Deputy Secretary-General, Taiwan society of cardiovascular intervention
- 2015-2015 Trainee of structural heart intervention, Mainz University Medical Center, Germany
- 2018-2020 Deputy Secretary-General, Taiwan society of cardiology
- 2018-2020 Deputy Secretary-General, Taiwan society of cardiovascular intervention
- 2012-2022 Member of Heart Failure Committee, Taiwan society of cardiology
- 2012-2022 Member of Pulmonary Artery Hypertension Committee, Taiwan society of cardiology
- 2018-2022 Member of Structural Heart Disease Committee, Taiwan society of cardiovascular intervention

Transcatheter Mitral Valve Repair in Taiwan 2022

宋思賢 教授

Percutaneous edge-to-edge mitral valve repair, using the MitraClip device for severe mitral regurgitation (MR) was first introduced in 2003. Since then, more than 100,000 cases have been performed worldwide and it remains the most established percutaneous therapy available for the treatment of severe MR. Currently, it is indicated for severe, symptomatic functional MR in patients who continue to have significant symptoms despite optimal guideline directed medical therapy, as well as in symptomatic patients with severe degenerative MR who are deemed too high risk for conventional surgical therapy in the opinion of the heart team. MitraClip is a well-established procedure with a growing body of clinical and real-world experience to not only improve symptoms, but also rescue lives.

Taipei VGH, as the leader of MitraClip therapy in Taiwan, conducted the first MitraClip treatment for an 83-year lady with degenerative MR on May 01, 2016. The lady was free from heart failure symptoms thereafter, and she was 90 years now. Till now, Taipei VGH has conducted vase majority of Mitraclip procedures in Taiwan, and the heart team has proctored majority cases outside Taipei VGH in Taiwan, help international doctors in Hong Kong, Vietnam, Thailand, Korea, and China understand and practice MitraClip procedures. The Taipei VGH heart team has involved more than 350 MitraClip procedures in the world, leading Taiwan to the internation.

Nowadays, there have been 2 sizes for the third-generation clips and 4 sizes for the fourth-generation clips. Data from the EXPAND study has demonstrated the excellent results of using the 3rd generation MitraClip to treatment patients with severe MR and complex mitral anatomies beyond EVEREST II trials. The patient selection could have been distinct from the original proposed population. Therefore, the physicians may need to understand who could truly benefit from MitraClip beyond 2022.

黃冠智 醫師

Hospital

- 2017 May~2021 March: Heart Center, Chen-Hsin General Hospital, Taipei, Taiwan.
- 2015 July~2017 April: Department of Medicine, National Taiwan University Hospital, Jin-Shan Branch, New Taipei City, Taiwan.
- 2013~2015: Division of Cardiology, Department of Internal Medicine,
- National Taiwan University Hospital, Taipei, Taiwan
- 2011~2013: Department of Internal Medicine,
- National Taiwan University Hospital, Taipei, Taiwan

Education

- 2003 September ~ 2009 June
  Doctor of Medicine (6-year program), Department of Medicine, College of Medicine, National Taiwan University
- 2016 September ~2020 December
  MD PhD, Graduate Institute of Clinical Medicine, National Taiwan University College of Medicine

Internship

- 2007 June ~ 2009 June
  National Taiwan University Hospital, Taipei, Taiwan

Professional Experience

· 2009 July ~ 2010 July 4th	Military Doctor during mandatory military service
· 2010 July 5th ~ 2013 June	Resident of Internal Medicine, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan
· 2013 July ~ 2015 June	Fellow and Chief Resident of Cardiology, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan
· 2015 June ~ 2017 Apr	Attending physician, Cardiologist, National Taiwan University Hospital, Jin-Shan branch, New Taipei City, Taiwan
· 2017 May ~2021 Mar	Attending physician, Cardiologist, Heart Center, Chen-Hsin General Hospital, Taipei, Taiwan
· 2021 Apr	Attending physician, Cardiologist, National Taiwan University Hospital, Hsin-Chu branch, Hsin-Chu City, Taiwan

Artificial Intelligence Aids Cardiac Image Quality Assessment for Improving Precision in Strain Measurements

黃冠智 醫師

心臟超音波是最頻繁使用的心臟影像，但數值的變異度與正確性對評估治療效果會有很大的影響。心超影像分析已進入自動化的時代，大大減少了分析時的人為誤差，因此主要的數值變異來源是心超影像品質的本身。然而心超品質的優劣難以客觀評量，這一點人工智慧電腦視覺可以提供客觀的評估，在這裡與大家分享實務上利用 AI 影像品質評估對臨床決策的幫助。

胡瑜峰 教授

Current Position

- Attending physician, Department of Internal Medicine, Taipei Veterans General Hospital, Taiwan
- Professor, School of Medicine, National Yang-Ming University, Taiwan
- Section supervisor, ECG and Treadmill room, Division of Cardiology, Department of Internal Medicine, Taipei Veterans General Hospital

Visiting associate research fellow, Institute of Biomedical Science, Academia Sinica.

Education

- M. D. 2001, National Cheng-Kung University
- Ph.D. 2013, National Yang-Ming University

Training

- 2002-2005 Residency, Internal Medicine Department, Taipei Veterans General Hospital, Taiwan
- 2005-2008 Fellowship of cardiology and cardiac electrophysiology, Taipei Veterans General Hospital, Taiwan
- 2008-2009 Attending physician, Taipei Medical University Hospital, Taiwan
- 2009-now Attending physician, Taipei Veterans General Hospital, Taiwan
- 2013-2014 Post-doctor fellow, Heart institute, Cedar Sinai medical center, USA

Honor and Award

- 2009 Young Investigator Award, Taiwan society of cardiology
- 2010 Young Investigator Award, The 11th US-Japan-Asia Dialogue Symposium on Cardiovascular Diseases
- 2013 Winners on Asian Pacific Heart Rhythm Society/Medtronic fellowship program
- 2015 Benjamin N. Chiang Prize
- 2017 Best Article Award, Acta Cardiologica Sinica
- 2018 Paul Dudley White International Scholar Award, American Heart Association
- 2021 NCKU Outstanding Young Alumni Award
- 2022 FutureTech Award
- 2022 Wu Ho-Su Medical Research Award
- 2022 Physician Innovation Award, 醫師創新(改良)獎

Reprogram Quiescent Cardiomyocytes into Pacemaker Cells

胡瑜峰 教授

Conduction system disorders in the heart lead to slow heart rates that are insufficient to support the circulation, necessitating the implantation of electronic pacemakers. Although effective, current electronic devices have lead or generator malfunction, lack of autonomic responsiveness, undesirable interactions with strong magnetic fields, and device-related infections. Biological pacemakers, generated by somatic gene transfer, cell fusion, or cell transplantation, provide an alternative to electronic devices. Here we show that the exposure of rat quiescent ventricular cardiomyocytes to a silk-fibroin hydrogel activates the direct conversion of the quiescent cardiomyocytes to pacemaker cardiomyocytes by inducing the ectopic expression of the vascular endothelial cell-adhesion glycoprotein cadherin. The silk-fibroin-induced pacemaker cells exhibited functional and morphological features of genuine sinoatrial-node cardiomyocytes in vitro, and pacemaker cells generated via the injection of silk fibroin in the left ventricles of rats functioned as a surrogate in situ sinoatrial node. Biomaterials with suitable surface structure, mechanics, and biochemistry could facilitate the scalable production of biological pacemakers for human use.

葉志凡 醫師

Current position

- Attending physician, Division of Cardiology and Cardiovascular Center, Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan
- Clinical lecturer, College of Medicine, National Taiwan University

Education

- 2000/7-2007/6 M.D., Fu-Jen Catholic University, New Taipei City
- 2015/9-2022/1 Ph.D., Department and Graduate institute of Pharmacology, College of Medicine, National Taiwan University, Taipei

Career/Academic Appointments

- 2005/7-2005/8 Exchange student, University of Houston, Texas
- 2006/6-2007/6 Intern, National Taiwan University Hospital, Taipei
- 2008/7-2013/6 Resident, Department of Internal Medicine, National Taiwan University Hospital, Taipei
- 2011/7-2013/6 Clinical fellow, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Taipei
- 2018/1-2018/10 2021/1-2022/2 Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Biomedical Park Hospital Chu-Tung Campus
- 2018/11-2020/11 Visiting scholar, The University of Chicago
- 2013/7-Present Attending physician, Division of Cardiology, Department of Internal Medicine, National Taiwan University Hospital, Taipei
- 2015/9-Present Clinical lecturer, College of Medicine, National Taiwan University

Administrative Positions

- 2021/10-Present Deputy Secretary General, Taiwan Society of Lipids & Atherosclerosis
- 2022/4-Present Member of International and Cross Strait Committee, Taiwan Society of Cardiovascular Interventions

Flow-Dependent Endothelial Regulation and Atherogenesis

葉志凡 醫師

Atherosclerosis is the leading cause of morbidity and mortality worldwide. Despite well-established systemic risk factors, atherosclerotic lesions develop preferentially at arterial sites of curvature, branching, and bifurcation, where endothelial cells (EC) are exposed to multidirectional disturbed flow (DF) featuring oscillation, flow reversal, and low time-averaged shear stress. DF stimulates low-grade inflammation, compromises vascular integrity, and elevates glycolysis in atherosusceptible endothelium, while unidirectional flow (UF) promotes a quiescent endothelial phenotype resistant to atherogenesis. Current therapies for atherosclerosis mainly target systematic risk factors (e.g. hypercholesterolemia and hypertension) but not the vasculature per se. This underscores the significance to identify novel atherosclerosis-causing mechanosensitive mechanisms and moreover, develop novel vascular wall-targeted therapeutic approaches. Here, I am going to discuss a previously unidentified causal role of DF-induced endothelial TXNDC5 (thioredoxin domain containing 5) in atherosclerosis and moreover, focus on current therapeutic strategies targeting endothelial mechanosensitive pathways in vivo against atherosclerosis.

徐千彝 醫師

學歷

- 國立陽明大學醫學士
- 國立陽明大學臨床醫學研究所博士

現職

- 臺北醫學大學附設醫院心臟內科專任主治醫師
- 臺北醫學大學附設醫院心臟內科心臟衰竭組主任
- 臺北醫學大學專任助理教授
- 教育部部定助理教授(助理字第150522號)
- 台灣高血壓學會(第八屆) 理事
- 台灣高血壓學會(第八屆) 教育委學會委員暨執行秘書
- 台灣心肌梗塞學會(第一屆) 學術委員會委員
- 臺灣介入性心臟血管醫學會(第九屆) 編輯暨登錄委員
- 中華民國心臟學會(第二十八屆) 青年工作小組主任委員
- Frontiers in Cardiovascular Medicine 國際學術期刊(JCR 2021 IF 5.846) Editorial Board
- 內科專科醫師甄審委員會資格審查小組委員(2021, 2022)

經歷

- 台北榮民總醫院內科部住院醫師、住院總醫師、內科部主治醫師
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- 國立陽明大學內科學系兼任講師
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- 美國加州大學聖地牙哥分校(UCSD) 進修醫師
- 史瓦帝尼王國(Kingdom of Eswatini) 王室醫療團醫師
- 臺北醫學大學附設醫院特等病房主任
- 臺北醫學大學附設醫院君蔚國際病房主任
- 台灣高血壓學會(第七屆) 教育委員會委員

獲獎

- 102年台北榮總教學優良住院總醫師獎(2013)
- 104年退輔會優良醫師獎(輔醫字第1040090045號) (2015)
- 106年中華民國心臟學會第47屆年會暨學術演講會最佳口頭論文發表獎(2017)
- 107學年度臺北醫學大學附設醫院最佳主治醫師(實習醫師票選) (2019)
- 108年國立陽明大學醫學系優良教師(連續三年獲獎獲頒瑠璃獎座) (2019)
- 108年中華民國心臟學會第49屆年會暨學術演講會最佳口頭論文發表獎(2019)
- 108年中華民國心臟學會青年醫師研究獎(Young Investigator Award) 第一名(2019)
- 第九屆姜必寧獎(The Benjamin N. Chiang Young Investigator Award) - 海峽兩岸傑出青年心臟論文獎第一名(2019)
- 2021 美國心臟學會年會國際學者研究獎(Paul Dudley White International Scholar Award)

Identifying Novel Biomarkers for Cardiovascular Disease Risk Prediction

徐千彝 醫師

Cardiovascular disease is the leading cause of death worldwide. Disease-specific biosignatures have a biological characteristic that can be measured and evaluated objectively as an indicator of normal biological process, pathogenic process, or pharmacological response to a therapeutic intervention. Biomarkers, as a part of the biosignatures, can be used for a disease at different stages which may be associated with its onset, clinical course, or response to treatment. For cardiovascular diseases, circulating biomarkers that have been incorporated into clinical practice are mainly used asprognostic markers, and have been shown to have value in addition to classic cardiovascular risk factors, which include N-terminal pro-B-type Natriuretic Peptide (NT-proBNP) for heart failure, glycated haemoglobin (HbA1c) for glycaemic control in diabetes, high-sensitivity TroponinI, and high-sensitivity C-Reactive Protein (hs-CRP) for cardiovascular risk prediction. Among them, inflammatory related biomarkers such as hs-CRP have been shown useful particularly for coronary artery disease (CAD) patients with intermediate risk. However, further data are still required to examine the specificity and efficacy of these new biomarkers for their clinical implication in different disease severity and in patients of different races in the world. **The National Taiwan Biosignature Research (NTBR)** has successfully started to update the contemporary information and to investigate the potential predictors for clinical outcomes of stable CAD patients in Taiwan. The identification of new biomarkers, lifestyle and psychological personality may help to elucidate the complex mechanisms and provide the novel rational to the individual treatment strategies in Asian especially ethnic Chinese patients with CAD.

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【警語】(A)提早停用 ELIQUIS 會升高發生血栓事件的風險 提早停用任何口服抗凝血劑，包括ELIQUIS 在內，會提高血栓事件發生的風險。如果因病理性出血或療程完成以外的原因而停止使用 ELIQUIS 進行抗凝血治療時，則考慮使用另一種抗凝血劑。(B)脊椎/硬膜外血腫。當施行椎管內麻醉(脊椎/硬膜外麻醉)或脊椎穿刺程序時，接受 ELIQUIS 治療的患者有發生硬膜外或脊椎血腫的風險，血腫可能導致長期或永久性癱瘓。在安排病患接受脊椎處置時應考慮此風險。可能增加硬膜外或脊椎血腫的風險包括：• 使用置入型硬膜外導管 • 併用影響止血作用的其他藥物(例如非類固醇抗發炎藥[NSAID]、血小板抑制劑、其他抗凝血劑) • 有創傷或反覆施予脊椎/硬膜外穿刺者 • 有脊椎畸形脊或脊椎手術病史 • 目前未知椎管內處置與 ELIQUIS 給予的最佳時間間隔。密集監測患者是否出現神經損傷的徵兆和症狀。若發覺神經受損，必須給予緊急治療。對於接受抗凝血治療或即將接受抗凝血治療的患者，接受椎管內介入治療前應考量效益及風險。【學名】 Apixaban 【成分含量與劑型】 ELIQUIS 膜衣錠為口服用錠劑，每錠含有 2.5 毫克或 5 毫克 apixaban。【適應症】 1.用於成人非瓣膜性心房纖維顫動患者且有以下至少一項危險因子者預防發生中風與全身性栓塞。危險因子包括：(1) 曾發生腦中風或短暫性腦缺血發作(transient ischemic attack)，(2) 年齡大於或等於 75 歲，(3) 高血壓，(4) 糖尿病，及(5)有症狀之心衰竭(NYHA Class≥II)。2.在成人中治療深靜脈血栓(DVT)與肺栓塞(PE)， 以及預防深靜脈血栓與肺栓塞復發。用法與用量在非瓣膜性心房纖維顫動患者中預防中風和全身性栓塞對大部份的患者而言，ELIQUIS的建議劑量為每日兩次每次口服5毫克。對併有至少兩種下列特性的患者，ELIQUIS的建議劑量為2.5毫克每日兩次：年齡≥80 歲、體重≤60公斤、血清肌酸酐濃度≥1.5 mg/dL 。**治療深靜脈血栓與肺栓塞**：ELIQUIS的建議劑量為每日兩次每次口服10毫克治療最初的7天，7天之後的建議劑量則為每日兩次每次口服5毫克。預防深靜脈血栓與肺栓塞復發經過至少 6 個月的深靜脈血栓或肺栓塞治療後，ELIQUIS 的建議劑量為每日兩次每次口服 2.5 毫克。無法吞服整顆錠劑的患者可將 5 毫克及 2.5 毫克的 ELIQUIS 錠劑壓碎懸浮於水中、5% 的等張葡萄糖溶液(D5W) 中、或蘋果汁中、或與蘋果醬混合，然後立即以口服方式使用。此外，可將 ELIQUIS 錠劑壓碎懸浮於 60mL 水中或 5%的等張葡萄糖溶液(D5W)中，然後立即經由鼻胃管(NGT)投予。腎功能不全:對輕度或中度腎功能不全的病人，並不須調整劑量。對於重度**腎功能不全**(肌酸酐廓清率 15-29 毫升/分鐘)的患者，可適用下列建議：治療深靜脈血栓與肺栓塞以及預防深靜脈血栓與肺栓塞的復發(VTEt)時，apixaban 應謹慎使用；在非瓣膜性心房纖維顫動(NVAF)患者中預防中風和全身性栓塞時，應調降患者的 apixaban 劑量為2.5 毫克每日兩次。血清肌酸酐≥1.5 mg/dL (133 micromole/L)的患者若同時併有年齡≥80 歲或體重≤60 公斤，亦應調降 apixaban 劑量為 2.5 毫克每日兩次。在肌酸酐廓清率<15 毫升/分鐘或正在接受透析治療的病人中，目前並無臨床使用經驗，因此不建議使用 apixaban。禁忌事項: 有活動性病理性出血現象，對 ELIQUIS 會產生嚴重過敏反應(如過敏性反應，anaphylatic reactions)，或併有凝血異常及臨床相關出血風險的肝病。**警語及注意事項**提早停用後，發生血栓事件的風險升高。ELIQUIS 會升高出血風險，並可能引發嚴重甚至可能致命的出血。當施行椎管內麻醉(脊椎/硬膜外麻醉)或脊椎/硬膜外穿刺，接受抗血栓劑治療以預防血栓栓塞併發症的患者有發生硬膜外或脊椎血腫的風險，而可能導致長期或永久性癱瘓。目前尚未對裝有人工心臟瓣膜的患者研究過 ELIQUIS 的安全性與療效。因此，ELIQUIS 不建議用於這類患者。不建議以 ELIQUIS 治療代替傳統未分段肝素(unfractionated heparin)，作為血液動力學上呈現不穩定性或可能需接受溶栓治療或肺栓塞切除術的肺栓塞患者的初始治療。對於被診斷為三重陽性抗磷脂質症候群(APS)的病人，不建議使用包括 ELIQUIS 在內的直接口服抗凝血劑(DOAC)。需要抗凝血治療之具有生育能力的女性應與其醫師討論懷孕規劃。有子宮異常出血的女性應評估口服抗凝血劑的已知臨床顯著子宮出血（可能需要婦科手術介入）風險。【藥品交互作用】Apixaban是CYP3A4與P-gp的作用受質。CYP3A4與P-gp的抑制劑會升高apixaban的曝藥量，從而升高出血的風險。CYP3A4與P-gp的誘導劑會降低apixaban的曝藥量，從而升高中風及其他血栓栓塞事件的風險【過量】目前並無ELIQUIS的解毒劑。ELIQUIS使用過量會升高發生出血的風險。在對照性臨床試驗中，曾對健康受試者連續3至7天口服投予劑量高達每日50毫克的apixaban（連續7天每天投予兩次25毫克或連續3天每天投予一次50毫克），結果並未造成任何具臨床關聯性的不良影響。對健康受試者於服用一劑20毫克apixaban 2及6小時後投予活性碳，分別會使apixaban的平均AUC降低50%及27%。因此，在過量使用或意外服用apixaban時的處置中，投予活性碳可能會有幫助。【不良反應】下列臨床顯著不良反應在處方資訊中的其他部分有更詳盡的討論: 提早停用後，發生血栓事件的風險會升高、出血、脊椎/硬膜外麻醉或穿刺 。【藥品保存注意事項】儲存於30℃ 以下。

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