Symposium of 2024 Guidelines of the TSOC on the Primary Prevention of Atherosclerotic Cardiovascular Disease

時間: 09:00-12:00, March 17, 2024

地點: 高雄漢來大飯店 15 樓會展廳 (高雄市前金區成功一路 266 號)

Time	Topic	Speaker	Chair
09:00-09:05	Opening Remarks		王宗道
09:05-09:20	Scope, Features, and Key Messages of the Guidelines	趙庭興	王宗道
09:20-09:35	Risk Evaluation and Environmental Exposure	簡國龍	鄭正一
09:35-09:50	The Role of Carotid Ultrasound and PWV	王宇澄	鄭正一
09:50-10:05	DM: Impact, Preventive Strategies, and Interventions	林宗憲	林韋丞
10:05-10:20	Panel Discussion		林韋丞
10:20-10:35	Healthy Break		
10:35-10:50	The Role of CAC Score/CCTA/ABI	陳柏偉	黃偉春
10:50-11:05	CKD: Impact, Preventive Strategies, and Interventions	林維文	黃偉春
11:05-11:20	Hyperuricemia/Gout and Metabolic Syndrome	張獻元	張雲德
11:20-11:35	Physical Activity and Exercise	顏學偉	張雲德
11:35-11:50	Panel Discussion		陳永隆
11:50-11:55	Closing Remarks		陳永隆

Name: 趙庭興(Chao Ting-Hsing)

甲、現職：

1、中山醫學大學醫學院醫學系內科教授兼中山醫學大學附設醫院副院長。

2、國立成功大學醫學院醫學系內科教授兼心臟血管科主治醫師。

3、行政院衛生福利部醫院評鑑委員、緊急醫療能力評定委員。

4、財團法人醫院評鑑暨醫療品質策進會「疾病品質照護認證」委員、「國家醫療品質獎」委員、「台灣臨床成效指標」小組委員、冠狀動脈疾病指標工作小組召集人。

5、中華民國心臟學會第 28 屆副理事長；台灣心臟基金會董事。

6、台灣高血壓學會第 9 屆理事、台灣醫療品質協會第 11 屆理事。

乙、經歷：

1、國立成功大學醫學院附設醫院主任秘書、門診部主任、公共事務室主任、健康管理中心主任。

2、國立成功大學醫學院附設醫院品質中心副主任、心臟血管科主任、斗六分院副院長兼品管中心主任、斗六分院醫務秘書兼內科部主任。

3、內科專科訓練醫院訪視委員、財團法人醫院評鑑暨醫療品質策進會「醫院品質績效量測指標系統與落實品質改善計畫」稽核委員。。

4、台灣介入性心臟血管醫學會第 5、6 屆理事、第 7 屆監事暨公共醫療政策委員會召集人；台灣醫療品質協會第 9、10 屆理事。

5、台灣高血壓學會第 6、7、8 屆理事、中華民國心臟學會第 22 屆副祕書長及第 27 屆秘書長、中華民國血脂及動脈硬化學會副祕書長、雲林縣醫師公會理事、健保署南區分局西醫健保審查心臟血管召集人。。

丙、學歷：台北醫學大學醫學士。

丁、海外進修：日本國立京都大學大學院醫學研究部研究員。

戊、專科醫師：內科醫學會、心臟學會、急救加護醫學會(重症)、介入；高階醫品師。

己、專科指導醫師：內科醫學會、心臟學會。

庚、榮譽及受獎：

1、第 30、31 屆及第 38 屆中華民國心臟醫學會(TSOC)年會最佳海報獎。

2、93、105、106、111 年國立成功大學醫學中心內科部主治醫師最佳研究獎。

3、國立成功大學醫學院(94、95、96 年度)最佳教學主治醫師。

4、97、99 及 100 年國立成功大學醫學中心醫療科技研究計劃成果海報獎。

5、2010、2015、2017、2022 TSOC 高血壓治療指引編撰委員。

6、2013 年美國心臟學院(ACC)年會最佳海報論文獎。

7、FACC、FESC 及 FAPSC；2014 年台灣內科醫學會最佳海報論文獎。

8、2017 年中華民國血脂及動脈硬化學會血脂治療指引編撰委員。

9、2018、2020 年 TSOC 糖尿病心血管藥物治療共識編撰委員。

10、 2021 年 TSOC Fabry’s Disease 診斷治療共識編撰委員。

11、 2023 年 TSOC 慢性冠心症治療指引編撰委員。

12、 2023 年 TSOC 心衰竭藥物治療專家共識編撰委員。

13、 2023 年 TSOC Cardiac Amyloidosis 診斷治療共識編撰委員。

14、 2024 年 TSOC Primary Prevention of ASCVD 指引編撰委員會主席。

辛、專長：醫療品質管理；心導管介入治療；高血壓；動脈硬化基因學；血管新生；幹細胞研究。

壬、論文：期刊論文 155 篇，會議論文 115 篇。科學雜誌審查委員及特刊編輯召集人：國際期刊 50 餘本。

癸、全球性多中心大型臨床研究國家總聯絡人、總計劃主持人、主持人：30 餘個。其中，擔任全國 T-FORMOSA study Steering Committee Chair。

填寫日期：20224/ 1 / 16

(西元年/月/日)

一、基本資料

中文姓名	簡國龍	英文姓名	KUO-LIONG CHIEN (First Name) (Middle Name) (Last Name)		
國籍	中華民國	性別	■男 □女	出生日期	1963年 4月 12日
聯絡地址	台北市徐州路17號517室				
聯絡電話	(公) (02) 3366-8017		(宅 /手機) 0972-651-051		
傳真號碼	(02) 2351-1955		E-mail	klchien@ntu.edu.tw	

二、主要學歷 (由最高學歷依次填寫，若仍在學者，請在學位欄填「肄業」，可自行增列)

學校名稱	國別	主修學門系所	學位	起訖年月(西元年/月)
國立台灣大學公衛學院	中華民國	流行病學研究所預醫組	博士	自 1995/09 至 2000/07
國立台灣大學	中華民國	醫學系	學士	自 1981/09 至 1988/06
				自 ____/____至 ____/____

三、專長 (請自行填寫與研究方向有關之學門及次領域名稱，可自行增列)

1. 冠狀動脈疾病	2. 預防醫學	3. 代謝症候群	4. 遺傳流行病學

四、現職及與專長相關之經歷 (指與研究相關之專任職務，請依任職之時間先後順序由最近者往前追溯，可自行增列)

服務機構	服務部門／系所	職稱	起訖年月(西元年/月)
現職：			
國立臺灣大學	公共衛生學院流行病學與預防醫學研究所	教授	自 2010/08~迄今
台大醫院	內科部	主治醫師	自 1995/07~迄今
經歷：			
國立臺灣大學	公共衛生學院流行病學與預防醫學研究所	教授且兼任所長	自 2011/08 至 2017/07
國立臺灣大學	公共衛生學院預防醫學研究所	副教授	自 2005/08 至 2010/07
台大醫院	內科部	住院醫師	自 1990/07 至 1995/07
			自 ____/____至 ____/____

五、研究成果目錄：論文及著述

1.請詳列個人最近五年內發表之學術性著作。
2.請將所有學術性著作分成三大類：(A)期刊論文（指已發表或已被接受者）(B)研討會論文(C)專書、技術報告等。
3.各類著作請按發表時間先後順序填寫。每篇文章請依作者姓名（按原出版之次序）、期刊年份、題目、期刊名稱、起訖頁數之順序填寫；若著作係經由科技部補助之研究計畫所產生，請於最後填入相關之科技部計畫編號。

(A) 期刊論文

1. LT Ho, JMJ Juang, YH Chen, YS Chen, RB Hsu, CC Huang, CM Lee, **KL Chien**: Predictors of left ventricular ejection fraction improvement in patients with early-staged heart failure with reduced ejection fraction, *Acta Cardiologica Sinica* 2023; 39(6):854-861. (Corresponding Author)

2. CJ Lai, JR Jhuang, YK Tu, CM Liu, CY Tsai, KL Chien: Relationship between Subjective Questionnaires and Videofluoroscopy of Dysphagia Evaluation: A Systematic Review and Meta-analysis, *The Journal of Nursing Research*, 2023 (Accepted) (Corresponding Author)

3. HY Hsu, YJ Chern, MS Hsue, TL Yeh, MC Tsai, JR Jhuang, LC Hwang, CJ Chiang, WC Lee, **KL Chien:** Diabetic Severity and Oncological Outcomes of Colorectal Cancer following Curative Resection: A Population-Based Cohort Study in Taiwan, *Cancer*, 2023;129(24):3928-3937., (Corresponding Author)

4. CT Hsieh, **KL Chien**, CJ Chiang, CC Wang, HY Hsu, HJ Lin, TL Yeh, MC Tsai, JR Jhuang, BY Hsiao, WC Lee: Risk of Cancer-Associated and Radiotherapy-Associated Cardiovascular Diseases among Patients with Breast Cancer, Clinical Breast Cancer, 2023;12:e16. (Corresponding Author)

5. R Lin, **KL Chien**, MC Tsai, YJ Wang, LY Hsu: Association of a priori and a posteriori dietary patterns with the risk of type 2 diabetes mellitus: a representative cohort study in Taiwan, *Journal of Nutritional Science*, 2023;12:e16., (Corresponding Author)

6. MK Tsai , W Gao, **KL Chie**n, TW Kyaw, CK Baw, CC Hsu, CP Wen: Resting Heart Rate Independent of Cardiovascular Disease Risk Factors Is Associated With End-Stage Renal Disease: A Cohort Study Based on 476347 Adults, *JAHA,* 2023;12:e030559. DOI: 10.1161/JAHA.123.030559

7. NC Cheng , Y Cheng, HC Tai, **KL Chien**, SH Wang, YH Chen, CT Fang, PR Hsue: High Mortality Risk of Type III Monomicrobial Gram-Negative Necrotizing Fasciitis: the Role of Extraintestinal Pathogenic Escherichia coli (ExPEC) and Klebsiella pneumoniae. *International Journal of Infectious Disease*, 2023; S1201-9712(23)00520-9

8. YH Su, **KL Chien**, SH Yang, WT Chia, JH Chen,YC Chen: Nonalcoholic Fatty Liver Disease Is Associated With Decreased Bone Mineral Density in Adults: A Systematic Review and Meta-Analysis, *Journal of Bone and Mineral Research*, 2023, 38 (8): 1092-103

9. HY Fan, WL Tsai, **KL Chien**, SY Hsu, L Huang, JW Hou, MC Tsai, C Yang, YC Chen: Associations of central precocious puberty with blood pressure trajectories: prospective cohort study. *Pediatric Research*, 2023 (Accepted)

10. FORCE Consortium: Omega-3 Blood Levels & Stroke Risk: Pooled and Harmonized Analysis of 183,291 Participants from 29 Prospective Studies, *Stroke*, 2023 (Accepted)

11. Chen, YY: The Impact of SGLT2i on Dementia and Cardiovascular Events in Diabetic Patients with Atrial Fibrillation, Diabetes/Metabolism Research and Reviews, 2023, (Minor Revision)

12. WH Tsai, YH Zeng, CC Lee, MN Chien, SC Liu, **KL Chien**, SP Cheng, PJ Tseng, M C Tsai: Association between thyroid cancer and cardiovascular disease: A meta-analysis. *Frontiers in Cardiovascular Medicine, section Cardio-Oncology*, 2023, 2023, 10:1075844.

13. TL Yeh, YHR Chen, HY Hsu, C Tsai, YC Wu, WC Lo, TH Huang, BC Liu, HH Lin, **KL Chien**: Cardiovascular disease burden attributable to high body mass index in Taiwan*, Acta Cardiologica Sinica,* 2023;39(4):628-642. (Corresponding Author)

14. HY Fan, YT Huang, YY Chen, JBK Hsu, HY Li, TC Su, HJ Lin, **KL Chien**, YC Chen: Hypertension as a Novel

王宇澄　Yu-Chen Wang 個人簡歷

學歷:

陽明大學醫學系醫學士(1994-2000)
中國醫藥大學臨床醫學研究所博士(2010-2016)
美國德州心臟醫學中心 Texas Heart Institute
研究員 (2011-2012)

現職:

亞洲大學附屬醫院內科部主任 (2021-迄今)
亞洲大學附屬醫院心臟科主任(2016-迄今)
教育部定副教授(2022-迄今)
亞洲大學醫學檢驗暨生物技術學系專任副教授(2022-迄今)
中國醫藥大學附設醫院心臟血管系兼任主治醫師(2019-迄今)
中華民國心臟內科專科醫師 (2008-迄今)
中華民國心臟學會心臟內科介入性次專科醫師 (2009-迄今)
中華民國心臟學會專科指導醫師(2015-迄今)
臺灣介入性心臟血管醫學會理事(2022-迄今)
台灣高血壓學會理事(2021-迄今)
台灣心肌梗塞學會理事(2021-迄今)
中華民國血脂及動脈硬化學會監事(2021-迄今)
臺灣介入性心臟血管醫學會編輯暨登錄委員會主委(2022-迄今)
台灣心肌梗塞學會學術委員會主委(2021-迄今)
中華民國心臟學會學術委員會委員(2022-迄今)
中華民國心臟學會治療準則與共識委員會委員(2022-迄今)
臺灣大學智慧健康科技研發中心諮詢委員(2021-迄今)
台中市醫師公會會員代表(2023-迄今)

經歷:

亞洲大學醫學檢驗暨生物技術學系專任助理教授(2016-2022)
教育部定助理教授 (2017-2022)
亞洲大學附屬醫院內科部副主任 (2018-2021)
中國醫藥大學附設醫院心臟血管系心臟預防醫學科主任 (2015-2019)
台大醫院內科住院醫師 (2003-2006)
台大醫院心臟內科研究醫師 (2006-2008)
中國醫藥大學附設醫院心臟內科主治醫師 (2008-2019)
亞洲大學附屬醫院醫務秘書(2016-2018)
中華民國心臟學會預防醫學委員會委員(2020-2022)
中華民國心臟學會國際交流委員會委員(2018-2022)

台灣介入性心臟血管醫學會副秘書長（2014-2016）
中華民國心臟學會高血壓委員會委員(2016-2018)
中華民國心臟學會副秘書長（2018-2020）
中華民國心臟學會甄審委員會委員(2016-2020)
臺灣介入性心臟血管醫學會編輯暨登錄委員會委員(2018-2022)
台灣高血壓學會學術委員會委員(2016-2020)

專長:

心臟內科學
冠狀動脈疾病與心導管介入手術
心臟衰竭
三高控制與心臟預防醫學

得獎：

- 中華民國心臟學會 41 屆年會最佳口頭論文報告獎（2011 年 5 月）
- 中國醫藥大學附設醫院 102 年度傑出主治醫師
- 2015 亞太經導管心血管介入治療高峰論壇(TCTAP)最佳案例獎 (Best Case Award)
- 中國醫藥大學附設醫院 103 學年度優良教學醫師
- 中國醫藥大學 103 學年度臨床優良教師金蘋果獎
- 中華民國心臟學會 46 屆年會青年醫師研究獎首獎（2016 年 5 月）
- 第 17 屆 國家新創獎 / 臨床新創獎（2020 年 12 月): 24/7 急性心肌梗塞智能輔助系統（Artificial Intelligence Assisted Autodiagnosis of ST Elevation Myocardial Infarction 24/7）
- 第 20 屆 國家新創獎 / 臨床新創獎（2023 年 12 月): 智慧化冠狀動脈疾病偵測系統: AI 輔助運動心電圖判讀（Intelligent Coronary Artery Disease Detection System: AI-Assisted Exercise Electrocardiogram Interpretation）

Tsung-Hsien Lin, MD, MSc, PHD, FESC, CPI 林宗憲

Education

September 1989 – June 1996

Department of Medicine, Kaohsiung Medical College, M.D. degree

September 1999 – June 2002

Graduate Institute of Clinical Medicine, Kaohsiung Medical University, Master of Science degree (MSc)

September 2003 – June 2007

Graduate Institute of Clinical Medicine, Kaohsiung Medical University, PHD degree

Current position

August 2013 – Present

Professor, Department of Internal Medicine, Faculty of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan, R.O.C.

August 2018-

Chief, Division of cardiology, Department of internal medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, R.O.C.

November 2014-

Medical secretary, Department of superintendent, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, R.O.C.

August 2001 –

Attending Physician, Division of Cardiology, Department of internal medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, R.O.C.

August 2022～May 2024

28th Executive, Taiwan Society of Cardiology (TSOC)

Dec 2022～Nov 2024

9th Executive, Taiwan Hypertension Society (THS)

Nov 2021～Sep 2023

10th Executive, Taiwan Society of Lipids & Atherosclerosis (TSLA)

Jan 2015-

Deputy editor in chief, Acta Cardiologica Sinca (SCI)

Publication: 285 SCI papers

Scientific meeting: 53 papers

Last update 20230701

陳柏偉 (Po-Wei, Chen)	
職稱	臨床助理教授兼主治醫師
學歷	成功大學臨床醫學研究所博士班 成功大學臨床醫學研究所碩士 高雄醫學大學醫學系
專長	靜脈栓塞/腳腫 相關評估和治療、下肢動靜脈疾病、周邊血管檢查和介入性治療、洗腎廔管介入治療、心導管檢查和介入性治療、心臟內科
重要經歷	現任 成大醫院心臟內科主治醫師 成大醫學院內科助理教授 中華民國心臟學會第廿八屆副秘書長(2022-) 成大醫院心臟內外科整合病房主任(2021.08-) 曾任 成大醫院內科住院醫師 2009 – 2012 成大醫院心臟內科總醫師 2012 – 2013 成大醫院心臟內科研究員 2012 – 2014 成大醫院斗六分院心臟內科主治醫師 2014 – 2016 成大醫院內科最佳教學總醫師 2013 成大醫院斗六分院內科最佳教學主治醫師 2015 成大醫院 APP 競賽優勝 2016 成大醫院院內研究計畫海報競賽甲組第三名 2016 中華民國心臟學會四十七屆年會海報論文發表獎優勝 2017 歐洲心臟學會 2017 海報論文展示 2017 成功大學臨床醫學研究所聯合進度報告第一名 2017 第 19 屆中國南方國際心血管學術會議病例報告 2017 第八屆姜必寧獎年度優良臨床病例獎第一名 2018 成大臨醫所暑期大專生培育計畫海報競賽第一名 2020 歐洲心臟學會電子海報論文展示 2021 成大醫院內科部「最佳研究獎」講師/主治醫師組第一名 2021 中華民國心臟學會「雜誌論文被引用獎勵申請」- 第一名 2022 成大醫院內科部「最佳研究獎」/助理教授組第一名 2022

Curriculum Vitae

Submitted Date: Jun.1, 2021

Name: Wei-Wen Lin MD, PhD(林維文)

Medical Department, Chung Shan Medical University, Medical Degree
Life Science Department, Tung-HaiUniversity, PHD
Section Chief of Heart, Cardiovascular center, Taichung Veteran Hospital.
Associated Professor of Life Science Department, Tung-Hai University,

中山醫學大學醫學系畢業
東海大學生命科學系博士班畢業
台中榮民總醫院 心臟血管中心 心臟衰竭科主任
教育部定副教授

Education:

1986/07/01 ~ 1992/06/30	Medical Student	ChungShanMedicalCollege, Taichung, Taiwan
1992/07/01 ~ 1994/06/30	Internship	ChungShanUniversity H, Taichung, Taiwan
2003/07/01 ~ 2007/11/30	PH. D Life Science	Department, Tung-HaiUniversity, Taichung, Taiwan
2007/12/1~2008/12/31	VisitingScholar	University of Connecticut, Regenerative Medicine Center, Connecticut, USA
2009/09/01~2009/11/30	Visiting Scholar	Berlin Heart Center, Berlin, German.

Employment Record:

1994/07/01 ~ 1997/06/30	Resident	Internal Medicine, VeteransGeneralHospital, Taichung
1997/07/01 ~ 2001/06/30	Fellow	Adult Cardiology, Cardiovascular center, VeteransGeneralHospital, Taichung
2001/07/01 ~ present	Attending Cardiologist	Adult Cardiology, Cardiovascular center, VeteransGeneralHospital, Taichung

Board Certification:

1997/12	The Society of Internal Medicine, Taiwan. (M4767)
2000/10	The Society of Emergency Medicine and Critical Care.
2000/12	The Republic of China Society of Cardiology, Adult. (S758)

Research Interest:

1. Molecular mechanism of atherosclerosis, reverse cholesterol transport.
2. Echocardiography, non-invasive hemodynamic evaluation of heart function.
3. Embryonic stem cell and therapeutic cloning research
4. Cardiac Catheterization, precutaneous coronary intervention.

CURRICULUM VITAE

Hsien-Yuan Chang, MD

Current position

2019 ~	Attending Physician, Division of Cardiologist, Department of Internal Medicine, National Cheng Kung University Hospital, Tainan, Taiwan
2021~	Assistant Professor, Department of Internal Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan

Education

2000 ~ 2007	MD, College of Medicine, National Cheng Kung University, Tainan, Taiwan
2015 ~ 2016	Master program, Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan
2019~	Doctor program, Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan

Relevant Experience

2009 ~ 2011	Residency, Department of Internal Medicine, National Cheng Kung University Hospital, Tainan, Taiwan
2012 ~ 2013	Fellowship in Cardiology, National Cheng Kung University Hospital, Tainan, Taiwan
2014 ~ 2017	Cardiologist, National Cheng Kung University Hospital, Dou-liou Branch, Yun-Lin, Taiwan
2018 ~ 2019	Chief of Cardiology, National Cheng Kung University Hospital, Dou-liou Branch, Yun-Lin, Taiwan
2020	中華民國心臟學會第廿七屆副秘書長
2022	臺灣介入性心臟血管醫學會第九屆周邊血管介入委員會委員
2023	中華民國心臟學會第廿八屆財務委員

Board certification

2008	Registered Physician – Taiwan
2012	Board of Internal Medicine – Taiwan
2014	Board of Adult Cardiologist – Taiwan
2016	Board of Interventional Cardiologist – Taiwan

Award

2020	Young Investigator Award of the Taiwan Society of Cardiology
2022	成大醫院內科 111 年度助理教授組最佳研究獎第二名

簡歷

姓名：顏學偉

現任:

高雄市立大同醫院醫師

學經歷：

高雄醫學大學醫學系醫學士

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心臟功能室主任

心臟內科主任

專科:

中華民國內科專科醫師

中華民國心臟內科專科醫師

中華民國心臟內科專科指導醫師

中華民國急救加護重症專科醫師

中華民國重症學會專科醫師

中華民國重症學會專科指導醫師

臺灣介入性心臟血管醫學會專科醫師

Symposium of 2024 Guidelines of the TSOC on the Primary Prevention of Atherosclerotic Cardiovascular Disease

1. Scope, features, and key messages of the guidelines

2. Development of this guideline: Why, when, how, and what?

Ting-Hsing Chao (趙庭興), MD, FACC, FESC, FAPSC

Professor of Internal Medicine

National Cheng Kung University College of Medicine and Hospital

Chung-Shan Medical University Hospital; School of Medicine, Chung Shan Medical University, Taichung, Taiwan

1. The 2024 Guidelines of the Taiwan Society of Cardiology on the Primary Prevention of Atherosclerotic Cardiovascular Disease: for the first time in the society.
2. Novelties of the current guidelines: focus on ASCVD prevention; comprehensive but not wordy with going details in each factor or disease entity; covering local features (metabolic syndrome, hyperuricemia, hepatitis C, colon polyps, nephrolithiasis, and life medicine, etc); cite largely local studies; covering primordial prevention; logistic thinking approach.
3. In order to enhance medical education and health promotion not only for physicians but also for public, we proposed a slogan (2H2L) for primary prevention of ASCVD on the basis of the essential role of healthy dietary pattern and lifestyles: “Healthy Diet and Healthy Styles to Help Your Life and Save Your Lives”. We designed an acronym of the modifiable risk factors/enhancers and relevant strategies to facilitate memories: “ABC2D2EFG-I’M2 ACE”: Adiposity, Blood pressure, Cholesterol and Cigarette smoking, Diabetes mellitus and Dietary pattern, Exercise, Frailty, Gout/hyperuricemia, Inflammation/infection, Metabolic syndrome and Metabolic dysfunction-associated fatty liver disease, Atmosphere (environment), Chronic kidney disease, and Easy life (sleep well and no tension).

Today’s talk will cover above issues.

簡國龍

危險評估及環境暴露-簡國龍

1. ASCVD 初級預防的重點
2. 如何作危險評估?
3. 如何作環境暴露?
4. 建立預測模型的注意的事項
5. 嶄新工具如 AI、omics 環境因子，如何用在 ASCVD 的危險評估?
6. 總結

The role of carotid ultrasound and PWV

亞洲大學附屬醫院 王宇澄醫師

Carotid ultrasound, a non-invasive method for detecting atherosclerosis, measures carotid intima-media thickness (CIMT) and identifies carotid plaques. Its use in routine screening remains debated due to inconsistencies in CIMT measurement and its predictive value for cardiovascular disease (CVD). Studies show a correlation between CIMT and increased cardiovascular risk, but not with event occurrence. Carotid plaques, however, are recognized as a significant independent risk factor for atherosclerotic cardiovascular disease (ASCVD), with better diagnostic accuracy for future coronary artery disease events compared to CIMT. The presence of plaques is more potent in predicting cardiovascular risks. Additionally, a low end-diastolic velocity in the common carotid artery is linked to future cerebro-cardiovascular events in certain populations.

Recommendations of the guideline advise using carotid ultrasound to evaluate carotid plaque burden in certain patients for enhanced risk classification, while routine CIMT screening is not recommended. End-diastolic velocity measurement may also be used to improve cardiovascular event prediction.

Arterial stiffness (ArtS), primarily affecting large elastic arteries, is a marker of arteriosclerosis and a significant risk factor for ASCVD. It reflects changes in arterial wall composition, influenced by factors like blood pressure (BP), aging, genetic background, and metabolic syndrome. ArtS can precede ASCVD symptoms and has predictive value for cardiovascular events and mortality, independent of traditional risk factors. Pulse wave velocity (PWV) measurements, particularly carotid-femoral PWV (cfPWV) and brachial-ankle PWV (baPWV), are used to assess ArtS. These measurements have differing predictive values and standardization is crucial. Lifestyle modifications and pharmacological interventions can improve or slow ArtS progression.

Key recommendations of the guideline include using a cfPWV or baPWV cutoff value for risk assessment in primary prevention, utilizing PWV as a risk enhancer in clinical decision-making, and considering PWV in patients with conditions like diabetes, hypertension, and chronic kidney disease (CKD) for more accurate risk assessment. PWV may also be considered in stage 1 hypertension cases where the need for pharmacologic intervention is uncertain.

DM: Impact, Preventive Strategies, and Interventions

高雄醫學大學 附設中和紀念醫院
心臟血管內科
林宗憲

Regular monitoring for the development of type 2 diabetes in those with prediabetes annually is recommended. Lifestyle modification to prevent or delay the onset of type 2 diabetes is recommended.

The target HbA1c is <7% for the diabetics.

The Role of CAC Score/CCTA/ABI

陳柏偉

Vascular calcification, a hallmark of atherosclerosis, is influenced by factors such as hyperlipidemia and diabetes. Coronary Artery Calcium (CAC) quantification, indicative of disease severity, serves as a prognostic tool. Studies demonstrate CAC's superior utility in predicting future Atherosclerotic Cardiovascular Disease (ASCVD) events compared to traditional biomarkers. The current focus on primary prevention strategies, particularly statin therapy eligibility, involves using CAC in decision-making. ACC/AHA guidelines suggest considering CAC scores in asymptomatic individuals with borderline or intermediate ASCVD risk for statin initiation or postponement. While CAC is recommended as a risk modifier in low-moderate ASCVD risk, it is not recommended for high-risk asymptomatic individuals. Additionally, the role of Coronary Computed Tomographic Angiography (CCTA) in primary prevention remains uncertain, requiring further research. These recommendations underscore CAC's significance in risk assessment for ASCVD prevention.

The Ankle-Brachial Index (ABI) is a non-invasive test measuring the ankle-to-brachial blood pressure ratio, primarily used for diagnosis of peripheral artery disease (PAD). A value below 0.9 or equal to 1.3 or more indicates PAD. ABI is explored as a marker for Atherosclerotic Cardiovascular Disease (ASCVD) risk. Studies show low ABI correlates with increased cardiovascular mortality, myocardial infarction, and stroke risk. While ABI lacks sensitivity for screening, it enhances risk assessment in borderline or intermediate ASCVD risk individuals. Incorporating ABI into risk scores, especially for women, is cost-effective. Local data supports ABI's predictive power in specific populations, including diabetes patients and those undergoing hemodialysis. Recommendations include considering ABI as a risk enhancer for primary ASCVD prevention in borderline or intermediate-risk individuals and potential use in high-risk populations like diabetes or hemodialysis patients.

CKD: Impact, Preventive Strategies, and Interventions

Wei-Wen Lin, MD, PhD
Taichung Veterans General Hospital, Taichung, Taiwan

Chronic kidney disease (CKD) is an independent risk factor for the development of coronary artery disease (CAD), CKD share many same risks factor as CAD, such as age, DM, hypertension, hyperlipidemia. Many other nontraditional risk factors between CKD and CAD, including inflammation, oxidative stress, and abnormal calcium-phosphorus had been proposed. Combine these two diseases increased mobility and mortality of CAD, such as acute coronary syndrome, after percutaneous coronary intervention (PCI) with or without stenting, and after coronary artery bypass. In evaluating pathology of CAD in CKD patients died in CAD, incidence of plaque rupture across different stage of CKD is high. Highly association of calcification in both small and large artery, including coronary artery and aorta. Sudden death in CKD patients, including myocardial ischemia and arrhythmic are frequent finding. The association of CKD with CAD is driven by a high prevalence of CAD risk factors. The management of CAD should be also care about the modification of CKD, as well as comorbidity and risks of treatment side effects. Recent medication such as SGLT2i may be improved with better CAD and CKD outcomes, and development of better estimators of risk as opposed to increased focusing treatment of established and non-traditional risk factors is uncertain. Further understanding of the epidemiology, pathophysiology, diagnosis, and treatment of CAD in CKD are extremely important.

Hyperuricemia/Gout and Metabolic Syndrome

張獻元

Measuring serum uric acid levels can serve as a valuable means of identifying individuals who may be at an elevated risk of developing ASCVD. Wight control and increased physical activity remain cornerstone among lifestyle modification for prevention of hyperuricemia. However, for primary prevention of ASCVD, routine use of urate-lowering therapy in subjects with hyperuricemia or gout is not recommended.

Metabolic syndrome is considered as a risk enhancer and should be included in the risk assessment of ASCVD. Healthy lifestyle such as physical activity and healthy dietary pattern is recommended to prevent it. To reduce body weight and mitigate the risk of ASCVD, it is recommended to establish a comprehensive weight loss plan that incorporates exercise training and diet control. These interventions aim to promote healthy habits and encourage individuals to lose approximately 5-10% of their body weight. To attain the desired weight loss, a low carbohydrate diet ranging from 1200-1600 Kcal/day should be generally preferred over a very low carbohydrate diet (<800 Kcal/day) when considering long-term calorie restriction. A ketogenic diet or a very low-calorie diet may be considered in terms of short-term benefits and rapid initial weight loss under the supervision of medical professionals and might not be utilized as long-term dietary nutrition interventions due to various considerations. Pharmacotherapy is recommended as a treatment option for obese patients with a BMI equal to or exceeding 30 Kg/m^2. Liraglutide, orlistat, or naltrexone/bupropion ER is recommended to assist in weight management for these individuals. Bariatric surgery is recommended for obese patients who have a BMI equal to or exceeding 37.5 kg/m2 or a BMI equal to or exceeding 32.5 kg/m2 in the presence of related comorbidities such as type 2 DM.

Abstract (physical activity and exercise)

顏學偉

From epidemiological view, a pooled analysis showed that moderate-to-vigorous physical activity decreased mortality risks by 31-37%. Many benefits of physical activity were suggested including body weight reduction, decrease of TG and LDL-C, reduction of BP, modulation of inflammatory reaction and enhanced insulin-sensitivity.

All those ASCAD risk factors can be modified by physical activity, and then cardiac events could be significantly prevented. Unfortunately, according to a study from National Health Research Institution, 50.2% of population in Taiwan was reported to have no leisure time physical activity. Physical inactivity and sedentary life are strong associated with higher risk of CVD and mortality.

Therefore, we strongly recommend performing accumulated moderate-intensity of physical activity to achieve at least 150 minutes per week or vigorous-intensity aerobic physical activity 75 minutes per week (or an equivalent combination of moderate and vigorous activity) and resistance exercise at least 2 days per week.