

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

時間: 14:00-17:00, March 17, 2024

地點: 新竹安捷國際酒店 14 樓司舵廳 (新竹縣竹北市復興三路二段 168 號)

Time	Topic	Speaker	Chair
14:00-14:05	Opening Remarks		陳文鍾
14:05-14:20	Scope, Features, and Key Messages of the Guidelines	趙庭興	陳文鍾
14:20-14:35	DM: Impact, Preventive Strategies, and Interventions	林宗憲	吳志成
14:35-14:50	Dyslipidemia: Impact, Preventive Strategies, and Interventions	林肇鋒	吳志成
14:50-15:05	Inflammation/Infection/Frailty	劉邦彥	劉銘恩
15:05-15:20	Panel Discussion		劉銘恩
15:20-15:35	Healthy Break		
15:35-15:55	Obesity: Impact, Preventive Strategies, and Interventions	鄭正一	賴超倫
15:55-16:10	CKD: Impact, Preventive Strategies, and Interventions	林維文	賴超倫
16:10-16:25	The Role of Carotid Ultrasound, PWV, CAC Score and ABI	王宇澄	吳學明
16:25-16:40	Fatty Acid/fish Oil Supplements, Red Yeast, and Antiplatelet Therapy	蘇峻弘	吳學明
16:40-16:55	Panel Discussion		王宗道
16:55-17:00	Closing Remarks		王宗道

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 屆副秘書長及第 27 屆秘書長、中華民國血脂及動脈硬化學會副秘書長、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 慢性冠心病治療指引編撰委員。
- 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。

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 Sinica (SCI)

Publication: 285 SCI papers

Scientific meeting: 53 papers

Last update 20230701

林肇鋒醫師簡歷

現職	馬偕醫學院醫學系副系主任 馬偕醫學院醫學系部定副教授 馬偕紀念醫院心血管中心/心臟內科資深主治醫師 中華民國血脂及動脈硬化學會副秘書長 台灣老人急重症醫學會教育暨學術委員會主委 台灣老人急重症醫學會官方雜誌(International Journal of Gerontology)執行編輯
臨床專長	心臟血管醫學 血脂醫學 心導管介入手術
學術研究	心肌梗塞基礎研究 心血管藥物研究 高血脂與動脈硬化研究 健保資料庫大數據分析研究
學歷	台北醫學大學癌症生物學與藥物研發博士 國立陽明大學醫學系學士
經歷	馬偕紀念醫院內科部住院醫師 馬偕紀念醫院內科部心臟內科總住院醫師 花蓮門諾醫院心臟內科主治醫師 衛生福利部雙和醫院心臟內科主治醫師 日本豐橋心臟中心研修複雜性心導管技術 日本鎌谷綜合病院研修複雜性心導管技術 臺灣介入性心臟血管醫學會編輯暨登錄委員會委員 中華民國心臟學會第二十七屆預防心臟學委員會委員

劉邦彥 醫師

現職：

1. 國防醫學院內科學科部定助理教授兼三軍總醫院心臟內科主治醫師。

經歷：

1. 三軍總醫院澎湖分院心臟內科主治醫師。

學歷：國防醫學院醫學士；2005 年畢。東京大學博士；2020 年畢。

- 海外進修：2016 年至 2020 年：日本東京大學大學院醫學系研究科(進修主題：雌激素與血管重塑、Takotsubo 心肌症)。

專科醫師：內科醫學會、心臟學會、急救加護醫學會(重症)、介入。

榮譽及受獎：

1. 2019 年台灣內科醫學會年會海報佳作
2. 第 52 屆 (2022 年) 中華民國心臟醫學會年會海報競賽獎。

專長：雌激素與血管重塑研究。

教育訓練

1. 高雄醫學大學醫學系畢業 (1990.09~1997.06)
2. 哈佛大學進修研究 (2008.9~2010.8)
3. 長庚大學臨床醫學研究所博士班畢業 (2006.09~2012.06)

現職

1. 高雄長庚紀念醫院教授級主治醫師 (2023.07 至今)
2. 長庚大學兼任副教授 (2017.02 至今)

經歷

1. 高雄長庚紀念醫院心臟內科主任 (2017.07~2022.06)
2. 高雄長庚紀念醫院內科部副主任 (2015.07~2017.06)
2. 高雄長庚紀念醫院健檢中心主任 (2013.10~2017.09)
3. 高雄長庚紀念醫院心臟內科主治醫師 (2003.08 至今)
4. 高雄長庚紀念醫院心臟內科研究員 (2001.08~2003.07)
5. 高雄長庚紀念醫院內科部住院醫師 (1997.07~2000.06)

教職 部定副教授 (2017.08)

專業證照

1. 中華民國內科專科醫師(內專醫字第 005655 號) (2000.12)
2. 中華民國心臟學會專科醫師(92)中心專醫字第 013 號 (2004.01)
3. 中華民國心臟學會心臟血管介入治療專科醫師第 0306 號 (2007.11)
4. 中華民國心臟學會專科指導醫師 (99)中心專指醫字第 009 號 (2010.04)

榮譽

1. 中華民國心臟學會最佳論文第二名(2008)
2. 中華民國心臟學會最佳青年研究獎第一名(2012)

專長：冠狀動脈介入治療、血管生物學、心臟衰竭

論文及研究：SCI 醫學論文 70 篇

專業學會：台灣心肌梗塞學會理監事、中華民國心臟學會理事

公共事務：醫策會健康檢查品質認證委員、衛福部醫審會鑑定委員、高雄地方法院調解委員

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-Hai University, 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-Hai University, 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	Adult Cardiology, Cardiovascular center, Cardiologist
		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.

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)
台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)

姓 名：蘇峻弘 英文名字：Chun-Hung Su

現職單位：中山醫學大學附設醫院心臟內科主治醫師

中山醫學大學附設醫院心導管室主任

中山醫學大學醫學系專任教授暨副系主任

學歷：

中山醫學大學 醫學士

中山醫學大學 臨床醫學研究所醫學碩士

中山醫學大學 臨床醫學研究所醫學博士

專科學會：

台灣內科醫學會 內科專科醫師 (91 年至今)

中華民國心臟學會 心臟內科專科醫師 (93 年至今)

中華民國重症醫學專科醫師 (94 年至今)

中華民國心臟學會 心臟內科專科醫師指導醫師 (100 年至今)

中華民國心臟學會 心臟血管介入專科醫師 (96 年至今)

中華民國心臟學會第 26 屆副秘書長 (107 年 5 月至 109 年 7 月)

中華民國心臟學會 心衰竭委員會委員 (106 年至 107 年)

中華民國心臟學會 預防醫學委員會委員 (111 年 7 月至今)

台灣介入性心臟血管醫學會第 8-9 屆副秘書長 (109 年 2 月至今)

台灣介入性心臟血管醫學會第 9 屆編輯委員會副主委 (111 年 2 月至今)

台灣心肌梗塞學會第 1 屆學術委員會委員 (110 年 3 月至今)

中山醫學大學醫學系內科學科主任(109 年 8 月至 110 年 7 月)

中山醫學大學醫學系專任教授(112 年 2 月至至今)

**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?

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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.

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.

Dyslipidemia: Impact, Preventive Strategies, and Interventions

Chao-Feng Lin

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Department of Cardiology, MacKay Memorial Hospital, Taipei, Taiwan

時間: 14:00-17:00, March 17, 2024

地點: 新竹安捷國際酒店 14 樓司舵廳 (新竹縣竹北市復興三路二段 168 號)

Abstract:

Although a plenty of studies has established elevated low-density lipoprotein cholesterol (LDL-C) as a strong risk factor for ASCVD, the rate of adequate LDL-C control remains depressingly low. Consequently, primary prevention strategies for dyslipidemia have become an imperative public health priority that requires prompt attention. Recently, the Taiwan Society of Lipids and Atherosclerosis provided recommendations for optimal plasma LDL-C levels in subjects without clinically significant ASCVD based on individual's risk or comorbidities. Lowering plasma LDL-C levels by statin, ezetimibe, and PCSK9 inhibitors has been shown to reduce the risk of ASCVD. However, most pharmacological therapies to raise HDL-C or lower TG, particularly on top of LDL-lowering treatment, failed to improve clinical outcomes. There are also other emerging treatments; nevertheless, the efficacies of these treatments need to be proved in the future.

Inflammation/Infection/Frailty

劉邦彥

對動脈血管硬化心臟病的影響

- 發炎體的活化
- 先天性免疫的訓練
- 造血與衰老

Obesity: Impact, Preventive Strategies, Interventions

20231216

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Obesity is strongly linked to an increased risk of various cardiovascular diseases (CVDs), including hypertension, diabetes, dyslipidemia, metabolic syndrome, and sleep apnea. It is recognized as a major risk factor for the development of atherosclerotic cardiovascular disease (ASCVD). The National Health Promotion Administration of Taiwan has been utilizing specific diagnostic cut points for overweight and obesity since 2013, taking into account the degree of comorbidity, overall mortality rate, and public health epidemic screening. These cut points are based on body mass index (BMI) measurements, with a BMI of ≥ 24 kg/m² being considered overweight, and a BMI of ≥ 27 kg/m² indicating obesity. The proportion of individuals with a normal BMI ($18.5 \leq \text{BMI} < 24$ kg/m²) gradually declined over time, from 58.1% in the first wave to 51.5% in the second wave and further decreasing to 49.2% in the third wave of the Taiwan National Nutrition and Health Change Survey (2013-2016). Based on the data of National Health Interview Survey collected in 2013, it is estimated an 18% reduction in CVDs could be achieved if obesity/overweight can be prevented. The pathogenesis of obesity is complex and multifactorial, involving energy imbalance, hormone disorder, genetic disease, gut microbiota and medications. Targeting a weight loss of 5-10% is recommended as an initial goal, as this has been shown to yield significant health benefits in the context of metabolic syndrome and cardiovascular disease. This talk aims at giving an introduction into obesity in CVD, with special focus on definition, prevalence, pathogenesis and management. The details of impact, preventive strategies, interventions will be discussed.

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 morbidity 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.

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.

Fatty acid/fish oil supplements, red yeast, and antiplatelet therapy

Su, Chun-Hung M.D. Ph.D

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- For primary prevention of ASCVD, patients with elevated TG levels (≥ 150 mg/dL) who are at high ASCVD risk and have not achieved their lipid-lowering goals with statin therapy alone may benefit from the addition of icosapent ethyl, a highly purified form of EPA, at a dose of 2-4 g per day (COR IIa, LOE B).
- Patients with very high TG levels (≥ 500 mg/dL) regarding pancreatic risk may benefit from prescription-strength omega-3 fatty acid supplements, including EPA and/or DHA (COR IIa, LOE B).
- Routine use of fish oil or omega-3 supplements for primary prevention of ASCVD in patients with normal TG levels is not recommended (COR III, LOE A).
- Routine antiplatelet therapy for primary prevention of ASCVD among adults of any age is not recommended (COR III, LOE A).
- Aspirin 75-100 mg orally daily might be used for primary prevention of ASCVD among adults who are at high ASCVD risk and low bleeding risk (COR IIb, LOE A).
- Antiplatelet therapy is not recommended for primary prevention of ASCVD among adults with CAC score = 0 (COR III, LOE B).
- Aspirin 75-100 mg orally daily might be considered for primary prevention of ASCVD among adults with CAC 100-399 Agatston units and low bleeding risk (COR IIb, LOE B).
- Aspirin 75-100 mg orally daily might be indicated for primary prevention of ASCVD among adults with CAC score is ≥ 400 Agatston units or ≥ 75 th percentile and low bleeding risk (COR IIb, LOE B).