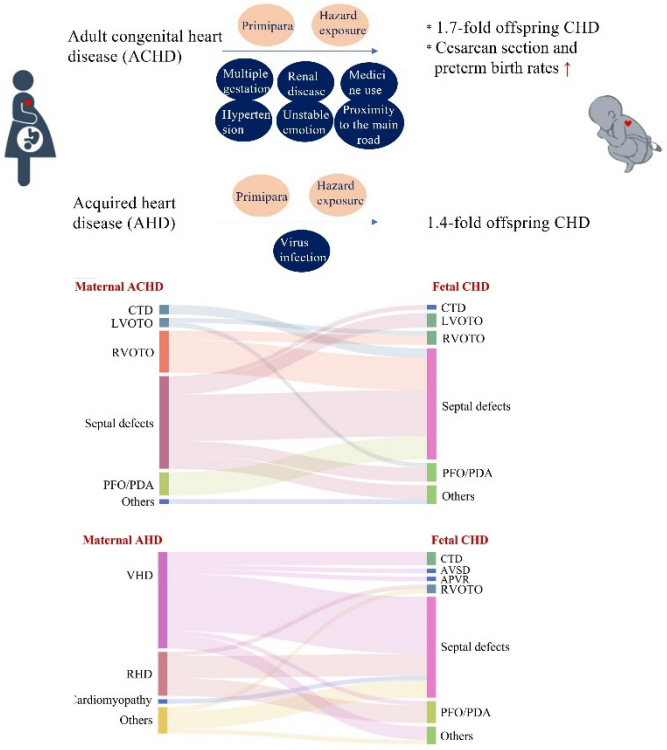
ACC/SCS ABSTRACTS AND CASES

Friday – Oral Abstracts and Case Discussions

Session Title:	**Cardiovascular Disease Prevention Oral Abstracts**
Session Time:	Friday, May 9, 2025, 1:40 pm - 2:30 pm
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	OCCURRENCE AND OUTCOME OF CONGENITAL HEART DISEASE IN OFFSPRING WITH MATERNAL CONGENITAL AND ACQUIRED HEART DISEASES, A BIRTH COHORT STUDY
Author Block:	Yanji Qu, Xiaoqing Liu, Shao Lin, Michael Bloom, Yanji Liu, Haiyun Yuan, Ximeng Wang, Jian Zhuang, Jie Li, Jimei Chen, Guangdong Provincial People's Hospital (Guangdong Academy of Medical Sciences), Southern Medical Uni, Guangzhou, China
Abstract Body:	**Background:** Maternal adult congenital heart disease (ACHD) is linked to offspring congenital heart disease (CHD) recurrence, while the acquired heart disease (AHD)-offspring CHD link is unclear. Potential effect modifiers and impacts on CHD birth outcomes are unknown. **Methods:** This study included 15,677 fetuses and mothers from a major Chinese cardiac center (2011-2021). CHD was confirmed via echocardiography, and maternal conditions were from medical records. Log-binomial regression estimated the RR and 95% CI of offspring CHD associated with maternal ACHD and AHD. Stratification analyses identified effect modifiers. Birth outcomes were compared between CHD and non-CHD participants regarding maternal ACHD/AHD. **Results:** Maternal ACHD and AHD increased offspring CHD risk by 1.7-fold (RR, 1.71; 95% CI, 1.26-2.31) and 1.4-fold (RR, 1.38; 95% CI, 1.02-1.87), respectively. Effects were stronger in primipara and those exposed to hazardous substances. Maternal ACHD also raised cesarean section and preterm birth rates in CHD offspring. **Conclusion:** Maternal ACHD and AHD increase CHD risk, with ACHD linked to worse birth outcomes. Further research is needed to explore the preventive impact of effect modifiers on reducing CHD risk in pregnant women with

ACHD/AHD.


Adult congenital heart disease (ACHD)
Primipara
Hazard exposure
Multiple gestation
Renal disease
Medicine use
Hypertension
Unstable emotion
Proximity to the main road
1.7-fold offspring CHD
Cesarean section and preterm birth rates ↑
Acquired heart disease (AHD)
Primipara
Hazard exposure
Virus infection
1.4-fold offspring CHD
Maternal ACHD
CTD
LVOTO
RVOTO
Septal defects
PFO/PDA
Others
Fetal CHD
CTD
LVOTO
RVOTO
Septal defects
PFO/PDA
Others
Maternal AHD
VHD
RHD
Cardiomyopathy
Others
Fetal CHD
CTD
AVSD
APVR
RVOTO
Septal defects
PFO/PDA
Others

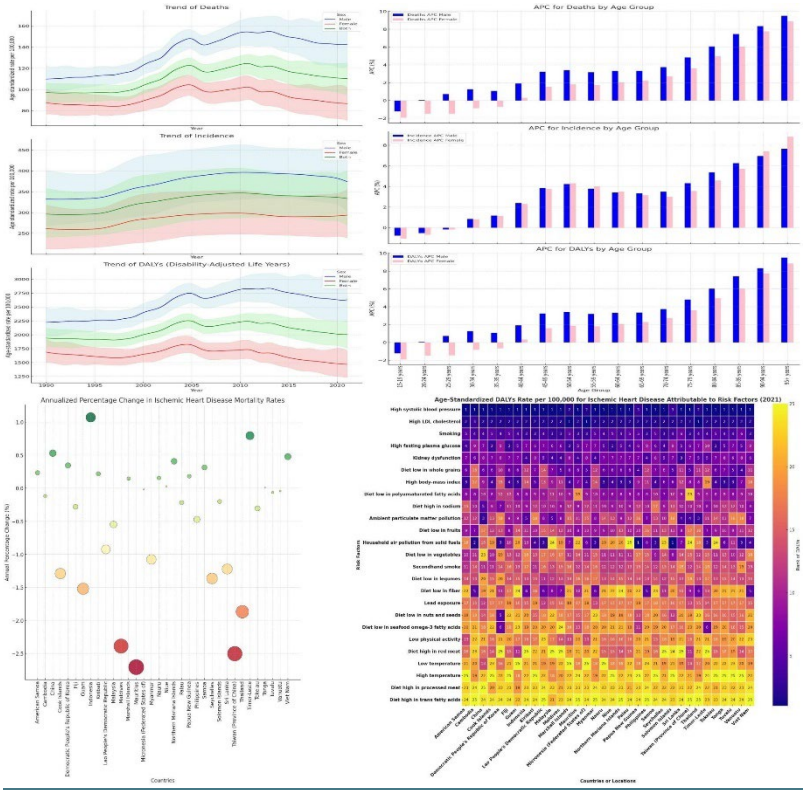
Session Title:	**Cardiovascular Disease Prevention Oral Abstracts**
Session Time:	Friday, May 9, 2025, 1:40 pm - 2:30 pm
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	REMNANT CHOLESTEROL AND INCIDENT CARDIOVASCULAR/CEREBROVASCULAR DISEASE—A POPULATION-BASED COHORT STUDY WITH TIME-WEIGHTED ANALYSIS
Author Block:	Jeremy Hui, Lifang Li, Siyuan Simon Li, Chloe Tsz Ching Hui, Nicole Yan Chee Lau, Oscar Hou In Chou, Hugo Hok Him Pui, Bosco Kwok Hei Leung, Carlin Chang, Tong Liu, Abraham Ka Chung Wai, Gregory Y. H. Lip, Bernard Man Yung Cheung, Gary Tse, Jiandong Zhou, School of Clinical Medicine, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, China, Cardiovascular Analytics Group, PowerHealth Research Institute, Hong Kong SAR, China
Abstract Body:	**Background:** Remnant cholesterol (RC) has been identified as an important risk factor for atherosclerotic cardiovascular/cerebrovascular disease (C/CVD). This study investigated the associations of RC and time-weighted RC levels with incident C/CVD. **Methods:** This retrospective cohort study included patients who attended family medicine clinics of public hospitals in Hong Kong between 2000 and 2003. They were followed up until 31st December 2019. Patients < 18 years old, with a history of C/CVD, and without baseline RC and ≥ three RC levels during follow-up visits were excluded. The study outcomes were incident acute myocardial infarction, heart failure, stroke/transient ischemic attack, and peripheral vascular disease. RC was calculated from standard lipid profiles. Time-weighted glucose and lipid profiles were calculated by multiplying the sum of two consecutive measurements by the time interval divided by the total time interval. Multivariable Cox regression was used to identify significant predictors of the study outcomes. **Results:** Amongst 75,342 patients (39.7% males, mean age: 61.3 years), 26,175 C/CVD events were recorded. Higher RC levels were associated with increased risks of acute myocardial infarction (hazard ratio [HR]: 1.15; 95% confidence interval [CI]: 1.11-1.21; P<0.0001), heart failure (HR: 1.09; 95% CI: 1.05-1.13; P<0.0001), stroke/transient ischemic attack (HR: 1.07; 95% CI: 1.03-

1.10; P=0.0001), and peripheral vascular disease (HR: 1.18; 95% CI: 1.00-1.38; P=0.048) after adjusting for demographics, comorbidities, and medications. Higher time-weighted RC levels were associated with increased risks of heart failure (HR: 1.09; 95% CI: 1.07-1.12; P<0.0001) and peripheral vascular disease (HR: 1.20; 95% CI: 1.07-1.35; P=0.003). The associations of higher RC levels with increased C/CVD risks were consistent across various subgroups, including age (< 65 years, ≥ 65 years), sex, and the presence or absence of hypertension, diabetes mellitus, and dyslipidemia.

Conclusion: Elevated RC and time-weighted RC levels were associated with higher risks of incident C/CVD and therefore are important considerations in risk stratification for primary prevention of C/CVD.

Session Title:	**Cardiovascular Disease Prevention Oral Abstracts**
Session Time:	Friday, May 9, 2025, 1:40 pm - 2:30 pm
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	REGIONAL DISPARITIES IN BURDEN AND TREND OF ISCHEMIC HEART DISEASE AND ITS ATTRIBUTABLE RISK FACTORS IN SOUTHEAST ASIA, EAST ASIA AND OCEANIA FROM 1990-2021: INSIGHT FROM THE GLOBAL BURDEN OF DISEASE STUDY 2021
Author Block:	Hardik Dineshbhai Desai, jay shah, Gujarat Adani Institute of Medical Sciences, Affiliated to K.S.K.V University, Bhuj, India
Abstract Body:	**Background:** Ischemic heart disease (IHD) ranks as the leading cause of mortality and disability across all causes within Southeast Asia (SEA), East Asia (EA), and Oceania. Collectively, these regions contribute approximately 32% to the global GDP, underscoring their significant economic impact. This analysis serves as a foundation for tailored health interventions and resource allocation to mitigate the effects of IHD on a macroeconomic and public health scale. **Methods:** Using GBD 2021 standardized methodology, we estimated incidence, prevalence, deaths, disability due to IHD and its attributable risk factor (RF) stratified by age, sex, year and location across the SEA, EA, and Oceania from 1990-2021. **Results:** From 1990-2021, the annual percentage change (APC) for total prevalence counts rose by 3.79%, deaths by 4.12%, and disability-adjusted life years (DALYs) by 3.24%. Regionally, EA experienced the highest burden over the last three decades. The age group <70 showed a significant increase in incidence and DALYs, while the group >70 saw a rise in deaths during the same period. Deaths from IHD attributable to metabolic RF showed the highest increase in APC at 2.40%, while DALYs rose by 1.71% from 1990-2021. **Conclusion:** Despite improvements in management, the study shows a higher burden of death from IHD, accounting for 14.97% of all causes of death and

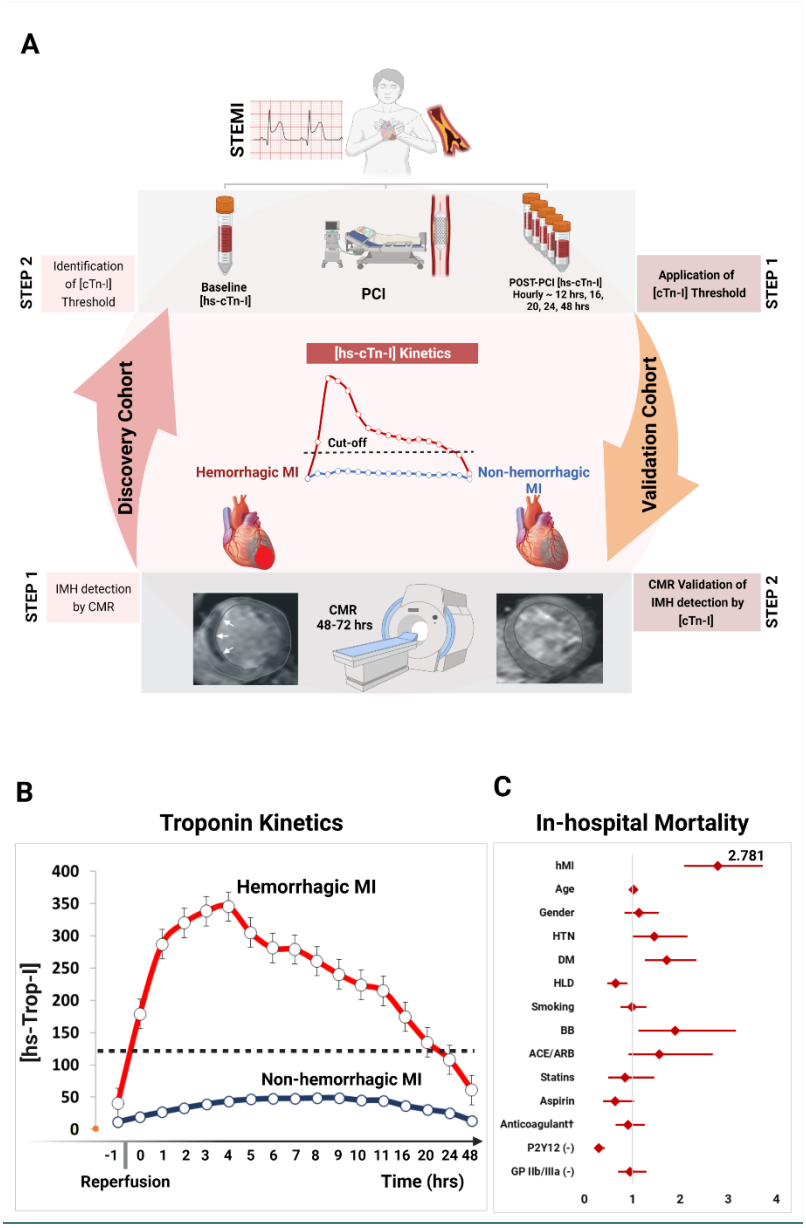
38% of all cardiovascular disease-related deaths.



Session Title:	**Cardiovascular Disease Prevention Oral Abstracts**
Session Time:	Friday, May 9, 2025, 1:40 pm - 2:30 pm
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	RISK FACTORS ASSOCIATED WITH ALL-CAUSE MORTALITY IN PATIENTS WITH AORTIC ANEURYSM - A RETROSPECTIVE OBSERVATIONAL COHORT STUDY
Author Block:	Jamie Cheung, Kai-Hang Yiu, Yap-Hang Chan, The University of Hong Kong, Hong Kong, China
Abstract Body:	**Background:** Aortic aneurysm (AA) is a life-threatening condition because it may lead to aortic rupture. However, risk factors associated with mortality in patients with AA have not been investigated in the Hong Kong Chinese population yet. Here, we aimed to investigate the risk factors in a retrospective study cohort. **Methods:** Patients ≥ 18 years old, who were diagnosed with AA (ICD-9 code: 441) in the Hong Kong Queen Mary Hospital during the period of January 1, 2015 - December 31, 2023 were included. Data of patients were retrieved from the Clinical Data Analysis and Reporting System, the territory-wide clinical database used in public healthcare sector. The primary outcome is all-cause mortality. Cox regression model was used. **Results:** 332 patients were included in the present analysis [men: 78.3%, baseline age: 69.9 ± 12.5 years, LDL: 2.1 ± 0.9 mmol/L, HDL: 1.2 ± 0.4 mmol/L, FPG: 6.0 ± 1.5 mmol/L, red blood cell distribution width (RDW): 14.2 ± 1.9%, eGFR: 65.2 ± 25.3 mL/min/1.73m^2]. The mean follow-up time was 3.1 ± 2.1 years, and 70 deaths were recorded. Risk factors associated with all-cause mortality in patients with AA include dyslipidemia [HR: 2.270 (95% CI: 1.161-4.438), p=0.017], diabetes [HR: 2.171 (95% CI: 1.138-4.139), p=0.019], atrial fibrillation [HR: 2.092 (95% CI: 1.097-3.988), p=0.025], coronary artery disease [HR: 1.997 (95% CI: 1.204-3.310), p=0.007] and anemia [HR: 2.281 (95% CI: 1.132-4.596), p=0.021]. **Conclusion:** Dyslipidemia, diabetes, atrial fibrillation, coronary artery disease and anemia are positively associated with all-cause mortality in patients with aortic aneurysm.

Session Title:	**Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases Oral Abstracts**
Session Time:	Friday, May 9, 2025, 2:40 pm - 3:30 pm
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	IN-HOSPITAL MORTALITY IN HEMORRHAGIC MYOCARDIAL INFARCTION
Author Block:	Keyur P. Vora, Kinjal Niranjan Bhatt, Tejas Pandya, Vishal Anand Poptani, Shrenik Doshi, Rohan Dharmakumar, Indiana University School of Medicine, Indianapolis, IN, USA, Synergy Superspecialty Hospital, Rajkot, India
Abstract Body:	**Background:** In-hospital mortality among revascularized STEMI patients remains high. Intramyocardial hemorrhage (IMH) post-PCI, a severe form of reperfusioninjury, is a key predictor of adverse outcomes, yet its immediate impact on mortality is underrecognized due to the lack of real-time diagnostic tools forhemorrhagic myocardial infarction (hMI). **Methods:** In the MIRON-TROP multicenter trial (n=207), we evaluated whether post-PCI high-sensitivity cardiac troponin I ([hs-cTn-I]) can serve as a rapid andreliable biomarker for hMI. We further analyzed a large STEMI registry (n=6180) to assess in-hospital mortality rates among patients diagnosed with hMI using[hs-cTn-I] levels. **Results:** Within the first hour post-PCI, [hs-cTn-I] identified hMI with 94% sensitivity, 89% specificity, and an AUC of 0.95. hMI emerged as the most significantpredictor of in-hospital mortality (Adjusted OR = 2.14, $p<0.001$), outperforming traditional risk factors such as age (Adjusted OR = 1.02, $p<0.001$), while sex,comorbidities, and pre-PCI troponin failed to predict mortality as strongly. **Conclusion:** Early detection of hemorrhagic MI using post-PCI [hs-cTn-I] offers a powerful new tool for clinicians, doubling the ability to predict in-hospitalmortality. This biomarker could transform acute STEMI care, enabling

targeted interventions to prevent early deaths in high-risk patients.

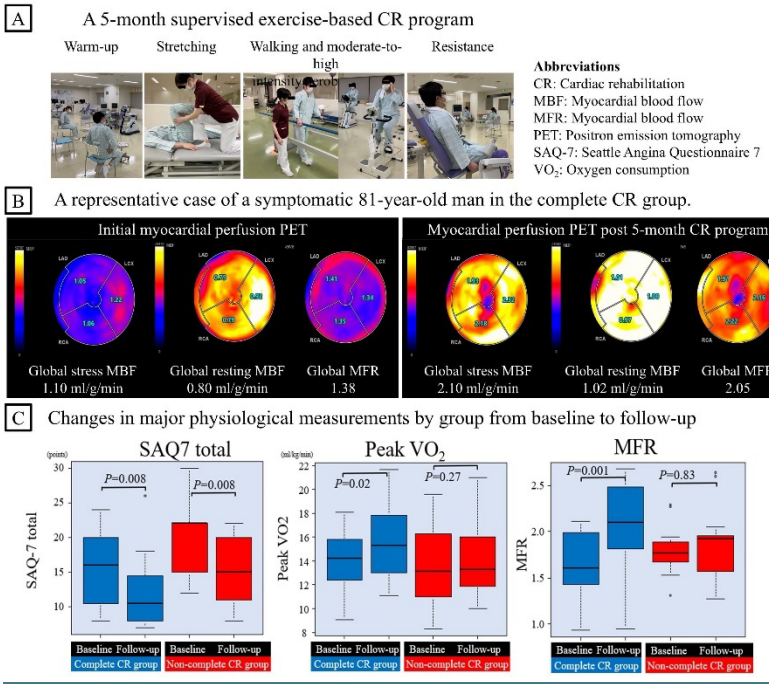


Session Title:	**Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases Oral Abstracts**
Session Time:	Friday, May 9, 2025, 2:40 pm - 3:30 pm
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	CLINICAL CHARACTERISTICS, HEMODYNAMIC PROFILE AND OUTCOMES IN PATIENTS WITH LOW-GRADIENT AND HIGH-GRADIENT SEVERE MITRAL STENOSIS - INFLUENCE OF FLOW-STATUS
Author Block:	Ryan Leow, Chan Meei Wah, Tony Li, William K. F. Kong, Kian Keong Poh, Ivandito Kuntjoro, Ching Hui Sia, Tiong Cheng Yeo, National University Heart Centre Singapore, Singapore, Singapore
Abstract Body:	**Background:** In severe mitral stenosis (MS), flow-status was recently recognized as potentially impactful in some patients with low transmitral gradients. **Methods:** We studied 172 patients with isolated severe rheumatic MS with mitral valve area ≤1.5cm^2. Mean gradient <10mmHg was considered low-gradient (LG), while high-gradient (HG) was defined as ≥10mmHg. Similarly, stroke volume index <35ml/m^2 was considered low-flow (LF) while ≥35ml/m^2 was considered normal-flow (NF). We compared clinical and echocardiographic characteristics including non-invasively determined net atrioventricular compliance, effective arterial elastance, end-systolic elastance, right ventricular function, and a composite outcome of all-cause mortality, heart failure hospitalization, mitral valve intervention, and stroke or transient ischemic attack. **Results:** Forty-three (25.0%) patients had NFLG MS, 60 (34.9%) had LFLG MS, 26 (15.1%) had NFHG MS and 43 (25.0%) had LFHG MS. Patients with LF status were more symptomatic (p=0.012) and had lower net atrioventricular compliance (LF 4.37±1.52ml/mmHg; NF 5.41±1.51ml/mmHg; p<0.001). Despite lower LVEF (LF 51.9±12.1%; NF 61.0±5.3%; p<0.001), they had similar end-systolic elastance (p=0.106) with increased arterial elastance (LF 2.64±0.80mmHg/ml; NF 1.70±0.44mmHg/ml (p<0.001). Right ventricular dysfunction was more common in LF patients (LF 79.6%; NF 36.2%; p<0.001). Subdividing LF patients into LFLG and LFHG subgroups showed the same pattern, suggesting that LF status, rather than mitral gradient, was linked to these findings. LF status was associated with poorer event-free survival (mean

survival LF 5.46 years, 95% confidence interval 4.05-6.87, NF 7.44 years, 95% confidence interval 6.17-8.72; p=0.001) whereas there was no association between mean gradient and outcomes (p=0.284).
Conclusion: Patients with LF severe MS had a characteristic pattern of echocardiographic abnormalities and poorer clinical outcomes regardless of mean transmitral gradient.

Session Title:	**Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases Oral Abstracts**
Session Time:	Friday, May 9, 2025, 2:40 pm - 3:30 pm
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	SUPERVISED CARDIAC REHABILITATION OF PATIENTS WITH ANGINA, NONOBSTRUCTIVE CORONARY ARTERY DISEASE, AND IMPAIRED MYOCARDIAL FLOW RESERVE: QUANTIFICATION OF CLINICAL EFFECTS BY ^{13}N-AMMONIA POSITRON EMISSION TOMOGRAPHY
Author Block:	SHIRO MIURA, Kojinkai Memorial Hospital, Sapporo, Japan
Abstract Body:	**Background:** The efficacy of exercise-based cardiac rehabilitation (CR) in patients with angina and nonobstructive coronary artery disease (ANOCA) remains unclear. The study aimed to investigate whether a multidisciplinary CR program is associated with improvements in myocardial flow reserve (MFR), symptomatic status, and exercise capacity in patients with ANOCA. **Methods:** Myocardial blood flow at rest and during adenosine triphosphate-induced hyperemia was quantified using ^{13}N-ammonia positron emission tomography (PET) in 29 patients diagnosed with ANOCA and impaired MFR (<2.5). Overall, 16 patients (complete CR group) completed the 5-month CR program (Fig.1A) and 13 (non-complete CR group) did not. At baseline and 5-month follow-up PET (Fig. 1B), symptomatic status and exercise capacity were assessed using the Seattle Angina Questionnaire (SAQ)-7 and cardiopulmonary exercise testing, respectively. **Results:** The MFR in the complete CR group increased from 1.60 (IQR: 1.43-1.98) to 2.09 (1.83-2.48) (P = 0.001). The SAQ-7 total score improved significantly from 16 (11-20) to 11 (8-14) (P = 0.008), and peak oxygen consumption (VO2) improved significantly from 14.2 mL/kg/min (12.4-15.8) to 15.3 mL/kg/min (13.0-17.9) (P = 0.02). In contrast, MFR (P = 0.83) and peak VO2 (P = 0.27) did not improve in the non-complete CR group (Fig. 1C). **Conclusion:** Conclusions: The 5-month exercise-based CR significantly improved MFR, symptomatic status, and exercise capacity in patients with

ANOCA and impaired MFR.



Session Title:	**Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases Oral Abstracts**
Session Time:	Friday, May 9, 2025, 2:40 pm - 3:30 pm
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	CORRELATION BETWEEN EPICARDIAL FAT VOLUME AND HIGH-RISK PLAQUE FEATURES ON CORONARY COMPUTED TOMOGRAPHY ANGIOGRAPHY
Author Block:	Lan Huong Thi Le, Vinh Nguyen Pham, Tam Anh Ho Chi Minh General Hospital, Ho Chi Minh, Viet Nam
Abstract Body:	**Background:** Epicardial fat, the visceral adipose tissue surrounding the myocardium, has been proposed as a potential risk factor for the development and progression of coronary artery disease (CAD). This cross-sectional study aimed to investigate the relationship between epicardial fat volume (EFV) and high-risk plaque (HRP) features identified on coronary computed tomography angiography (CCTA). **Methods:** The study included 169 consecutive patients with suspected CAD who underwent CCTA. EFV was semi-automatically quantified using Syngo.via software from Siemens Healthineers. The assessment of HRP included the presence of at least two out of four features: low attenuation (<30 HU), spotty calcification, positive remodeling, and the napkin-ring sign. Logistic regression analysis was performed to assess the association between EFV and HRP, adjusting for cardiovascular risk factors. **Results:** EFV increased with CAD severity, as categorized by the CAD-RADS scale. In multivariable analysis, EFV was associated with a 3.8% higher risk of obstructive CAD (odds ratio 1.038, 95% CI 1.023-1.052, $p < 0.001$), independent of cardiovascular risk factors. Additionally, patients with HRP had significantly higher mean EFV levels (n = 59, EFV = 120.2 ± 43.2 cm^3) compared to those without HRP (n = 110, EFV = 104.4 ± 39.3 cm^3), $p = 0.017$. Elevated epicardial fat volume (EFV) is strongly associated with the presence of high-risk plaque (HRP) features when compared to groups without these features. **Conclusion:** This study demonstrates a strong association between increased EFV and HRP features on coronary computed tomography angiography CCTA. EFV may serve as a valuable imaging biomarker for risk stratification and provide insights into the pathogenesis of coronary atherosclerosis.

Session Title:	**Challenging Cases in Cardiac Arrhythmias and Heart Failure and Cardiomyopathies**
Session Time:	Friday, May 9, 2025, 4:00 pm - 4:50 pm
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	TAKOTSUBO AND TRANSPOSITION: UNLIKELY COMPANY?
Author Block:	Karen Rausch, Robert Gluer, Ryan Maxwell, Emma Buosi, Mark Willing, Haris M. Haqqani, Toowoomba Hospital, Toowoomba, Australia, The Prince Charles Hospital, Brisbane, Australia

Abstract Body:

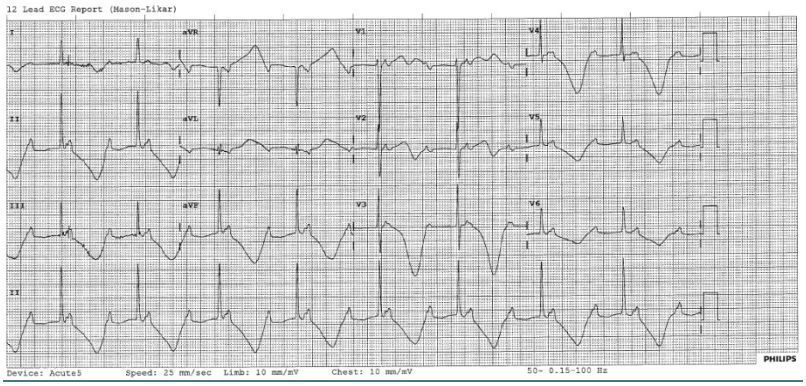
Background: Although Takotsubo cardiomyopathy (TC) and congenitally corrected transposition of the great arteries (ccTGA) are each not rare entities, there are scant reports of simultaneous presentation with both. This case presents a young female with TC, atrioventricular (AV) block and a new diagnosis of ccTGA.

Case: A 25-year-old female presented with a traumatic periorbital fracture and incidental, asymptomatic bradycardia. She had carried 3 uncomplicated pregnancies to term previously. Electrocardiogram revealed 2:1 AV block, gross T wave inversion and QT prolongation. Troponin I peaked at 1153 ng/L. Chest radiograph revealed mesocardia. Multimodality cardiac imaging confirmed a new diagnosis of ccTGA with systemic ventricular dysfunction, no delayed gadolinium enhancement, and patent epicardial coronary arteries. AV block worsened with minimal exercise. The severe repolarization abnormalities gradually resolved, consistent with TC.

Decision-making: A conduction system dual chamber pacemaker was inserted without complication. Post-procedural imaging showed improved systemic ventricular function.

Conclusion: cc-TGA may first present in adulthood with heart failure, AV-valve regurgitation, or cardiac conduction system abnormalities. Systemic ventricular dysfunction in ccTGA may be transiently exacerbated beyond baseline by TC. Conduction system pacing is an important option for preserving

ventricular function when treating AV block in ccTGA.



Session Title:	**Challenging Cases in Cardiac Arrhythmias and Heart Failure and Cardiomyopathies**
Session Time:	Friday, May 9, 2025, 4:00 pm - 4:50 pm
Topic 1:	Cardiac Arrhythmias
Publishing Title:	FALSE ALARM: ST ELEVATION IN A YOUNG PATIENT WITH CRITICAL ILLNESS-SPIKED HELMET SIGN
Author Block:	Rupendra Saha, Bhanu Duggal, Abhinavya Egala, AIIMS RISHIKESH, Rishikesh, India

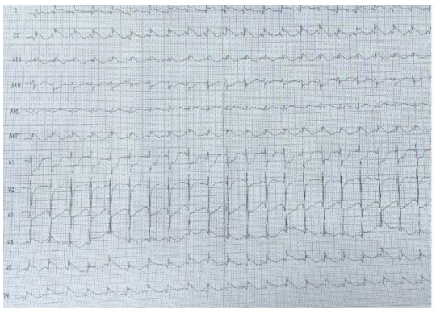
Abstract Body:

Background: Critical care units often witness an array of ECG findings that are not always attributable to an underlying cardiac disorder.

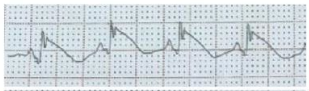
Case: A nine-year-old male presented with a ten-day history of intermittent fever and an eight-day history of yellowish discolouration of the body and eyes. He was found to be in acute fulminant liver failure in shock. Bedside echocardiography suggested a globally depressed LVEF of 30%. He succumbed to his illness within the next few days.

Decision-making: It is known that repetitive epidermal stretch or pulsatile motion of the diaphragm about the cardiac cycle may lead to a pseudo-ST elevation in subjects with raised intrathoracic or intraabdominal pressure. Acute abdominal events may cause this pattern in the inferior ECG leads; acute thoracic events may lead to changes in the chest leads. The shift of the ST segment baseline has been hypothesised to be due to overlap by the broad, inverted T(U)-waves onto the next QRS complex. Elevated intraabdominal pressure with ALF, splanchnic vasodilation, and intrathoracic pressure on invasive ventilation can lead to mechanical stretch.The QTc was prolonged to 620ms, which may be due to the adrenergic excess.

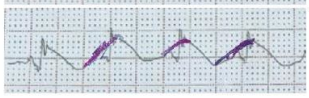
Conclusion: Learning points • ST elevation in a critically ill patient does not necessarily mean an acute myocardial infarction • The Spiked Helmet Sign is a sign of critical illness that can be seen in the pediatric age group also



12 lead ECG of the child and magnified leads below



Lead II



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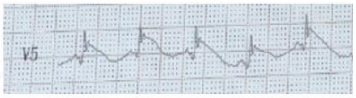
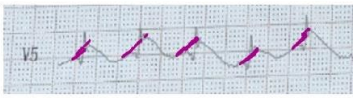




Session Title:	**Challenging Cases in Cardiac Arrhythmias and Heart Failure and Cardiomyopathies**
Session Time:	Friday, May 9, 2025, 4:00 pm - 4:50 pm
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	A CASE REPORT OF MYOCARDITIS WHO PRESENTED WITH BRADYCARDIA AND POLYNEUROPATHY LIKE SYMPTOMS IN A PATIENT WHO HAD JELLYFISH ENVENOMATION
Author Block:	Romeo III Habaradas Hierro, Raul Lontoc Lapitan, Makati Medica Center, Makati City, Metro Manila, Philippines
Abstract Body:	**Background:** Myocarditis is an inflammatory disease of the heart that may occur due to infections, immune system activation, or exposure to drugs or toxic substances. Though jellyfish stings has been reported to cause life-threatening cardiomyopathies, only a few were reported as bradycardia on presentation. **Case:** A.C., a 23-year-old female professional swimmer, with known allergies to montelukast and pollen with previous exposure to jellyfish stings was stung by jellyfish at the right arm 9 days prior to consult. She had pain on the area, which subsided over 2 days with paracetamol, hydrocortisone cream and liniment rub. 6 days after the incident, she had progressive upper extremity weakness which prompted consult. On admission, she had bradycardia as low as 35 BPM with episodes of chest pain and palpitation. Motor strength was 4/5 on the right upper extremity and 1+ reflexes on all four's. EKG only showed sinus bradycardia. CKMB and total IgE were elevated. CBC, Troponin I, ESR, LDH, electrolytes, respiratory panel and COVID-19 test, 2D Echo, EMG-NCV, whole spine and cranial MRI were unremarkable. Cardiac MRI showed myocardial edema, findings compatible with acute myopericarditis. **Decision-making:** A multidisciplinary approach was initiated. She was initially started with IV hydrocortisone, bilastine, terbutaline and colchicine. Her heart rate improved on the 4th hospital day and was eventually discharged asymptomatic with colchicine and tapering dose of prednisone. **Conclusion:** Myocarditis should be suspected in patients with or without cardiac signs and symptoms, who have a rise in cardiac biomarkers, EKG changes suggestive of acute myocardial injury, arrhythmia, or abnormalities of LV systolic function, particularly if the clinical findings are new and

unexplained. Jellyfish stings causing cardiac symptoms are usually mild except for some particular species. Exact numbers for mortality and morbidity are unknown due to underreporting and lack of jellyfish sting registry. To our knowledge, no reports of bradycardia and myocarditis with polyneuropathy-like symptoms were documented after jellyfish envenomation. Further case reports and studies are needed for this association.

Session Title:	**Challenging Cases in Cardiac Arrhythmias and Heart Failure and Cardiomyopathies**
Session Time:	Friday, May 9, 2025, 4:00 pm - 4:50 pm
Topic 1:	Cardiac Arrhythmias
Publishing Title:	IMMUNE CHECKPOINT INHIBITOR-ASSOCIATED MYOCARDITIS WITH THIRD-DEGREE ATRIOVENTRICULAR BLOCK: A CASE REPORT
Author Block:	CHI ZHANG, Jiangying Luo, Ping Zhang, Beijing Tsinghua Changgung Hospital, School of Clinical Medicine, Tsinghua University, Beijing, China
Abstract Body:	**Background:** Immune checkpoint inhibitors (ICIs), such as PD-1 and PD-L1 inhibitors, have revolutionized cancer treatment but can cause rare, life-threatening immune-related adverse events (irAEs) like myocarditis. This condition may result in severe arrhythmias, including complete atrioventricular (AV) block. With no standardized guidelines, this report highlights a rare case of ICI-induced myocarditis with complete AV block and explores therapeutic strategies. **Case:** An elderly female with a history of uterine malignancy developed sudden dyspnea, profuse sweating, and bradycardia (40 bpm) one month after initiating sintilimab (a PD-1 inhibitor). On admission, a 12-lead ECG confirmed complete AV block, and cardiac biomarkers were markedly elevated: CK-MB 68.4 ng/mL, MYO 1396 ng/mL, and TnT-hs 0.298 ng/mL, strongly suggesting PD-1-related myocarditis. Despite immunosuppressive therapy with high-dose intravenous methylprednisolone (transitioned to oral), intravenous immunoglobulin, and mycophenolate mofetil, conduction abnormalities persisted. A temporary pacemaker was implanted for bradycardia management during the acute phase. **Decision-making:** After six weeks of treatment, the absence of intrinsic conduction recovery necessitated the implantation of a permanent dual-chamber pacemaker. And immunosuppressive therapy improved cardiac biomarkers and symptoms, but the patient also experienced complications such as leukopenia and malnutrition, managed symptomatically. At discharge, the patient remained stable on metoprolol and methylprednisolone, with plans for pacemaker follow-up and immunosuppressive tapering. This case underscores the critical role of early intervention, sustained immunosuppressive therapy, and timely pacemaker implantation in managing

PD-1-related myocarditis with third-degree AV block.
Conclusion: This case offers valuable insights into managing ICI-associated myocarditis with severe conduction disturbances, emphasizing timely pacemaker implantation.

Session Title: **Friday Poster Session**

Session Time: Friday, May 9, 2025, 1:00 pm - 5:00 pm

Poster Board Number: 01

Topic 1: Multimodal Imaging and Valvular Diseases

Publishing Title: IMPACT OF RENIN-ANGIOTENSIN SYSTEM INHIBITORS ON 2-YEAR MORTALITY AND DISEASE PROGRESSION IN CHRONIC MITRAL REGURGITATION

Author Block: Can Wang, Erli Zhang, Haowen Ma, Xiangming Hu, Yunqing Ye, Haiyan Xu, Yongjian Wu, Fuwai Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing, China

Abstract Body:

Background: Chronic mitral regurgitation (MR) is associated with adverse outcomes, including significant morbidity and mortality. This study aimed to evaluate the impact of renin-angiotensin system inhibitors (RASI) on all-cause mortality and disease progression in patients with primary (PMR) and secondary MR (SMR).

Methods: The analysis included 3,297 patients with moderate to severe MR from the China Valvular Heart Disease registry who did not receive valvular interventions during enrollment and 2-year follow-up. Patients were categorized into three groups based on RASI use patterns: always, never, and inconsistent users.

Results: Kaplan-Meier analysis showed higher survival rates in always users compared to never users in both PMR (95.6% vs. 87.6%) and SMR cohorts (97.4% vs. 81.5%; both $P < 0.001$). Subgroup analyses confirmed consistent benefits across major risk factors. Notably, RASI use improved survival in patients with left ventricular ejection fraction (LVEF) <50% or 50-60% in both PMR (*P* for interaction =0.113) and SMR cohorts (*P* for interaction =0.307). Furthermore, consistent RASI significantly reduced MR severity, particularly in patients without intervention indications.

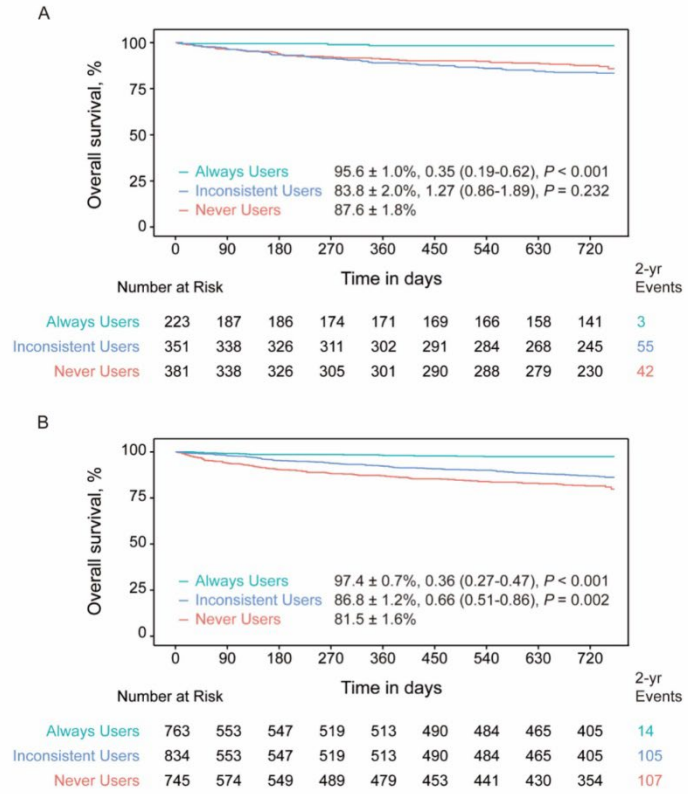


Figure 1. The Kaplan-Meier curve of overall survival associated with different patterns of RASI use. The rate of overall survival at 2-year follow-up among different RASI treatment patterns in PMR (**A**) and SMR (**B**) was presented as mean ± SD. The hazard ratio (HR) and 95% confidence interval (CI) were calculated with never users as reference. PMR, primary mitral regurgitation; SMR, secondary mitral regurgitation.

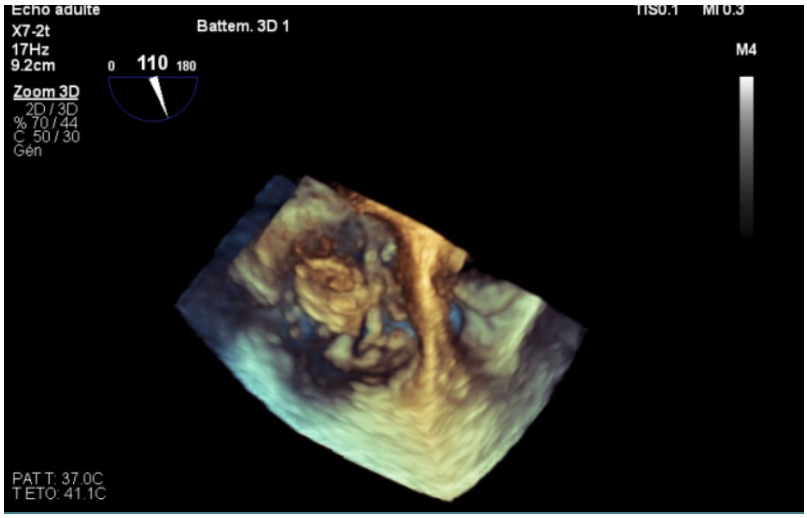
Conclusion: Consistent RASI use significantly reduces all-cause mortality and mitigates disease progression in patients with chronic MR. These findings support the early initiation of RASI therapy in MR management, particularly in patients with impaired or borderline left ventricular function.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	02
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	PREDICTORS OF MAJOR ADVERSE CARDIAC EVENTS AFTER A NORMAL DOBUTAMINE SINGLE-PHOTON EMISSION COMPUTED TOMOGRAPHY MYOCARDIAL PERFUSION IMAGING IN PATIENTS WITH BRONCHOSPASTIC LUNG DISEASE
Author Block:	Yi Suan Vivian Goh, Min Sen Yew, Tan Tock Seng Hospital, Singapore, Singapore
Abstract Body:	**Background:** Bronchospastic lung conditions such as asthma and chronic obstructive pulmonary disease (COPD) are characterized by systemic inflammation which increases risk of coronary artery disease (CAD). Functional ischemic evaluation is challenging due to respiratory symptoms that limit exercise while vasodilator stress agents are contraindicated. Dobutamine single-photon emission computed tomography (SPECT) myocardial perfusion imaging (MPI) is often used instead. While a normal SPECT MPI suggests a favorable outcome, this group remains underrepresented and their prognosis is unclear. We aim to identify predictors of major adverse cardiac events (MACE) in asthma and COPD patients with a normal dobutamine SPECT MPI. **Methods:** Between 1st January 2016 - 31st December 2017, asthma and COPD patients with a normal dobutamine SPECT MPI (normal perfusion and left ventricular ejection fraction ≥ 50%) were included. Individuals with established cardiovascular disease were excluded. Agatston coronary artery calcium (CAC) scoring using a dedicated computed tomography (CT) scanner was performed on the MPI day. Electronic medical records were reviewed for MACE [cardiac death, non-fatal myocardial infarction (NFMI), revascularization] occurrence. **Results:** 64 asthma and 28 COPD patients (mean age 68.0 years, 47.8% male) included. Over a mean follow-up of 4.3 years, 11 (12.0%) experienced MACE, comprising 6 NFMI, 3 cardiac deaths, and 2

revascularizations. After multi-variate analysis, CAC [HR 1.001 (95%CI 1.000 - 1.001)] and prior stroke [HR 4.841 (95%CI 1.206 - 19.441)] remained significant predictors of MACE after adjustment for age, gender, diabetes, and aspirin use. Patients with or without prior stroke were not different in their mean CAC (480.5 vs 404.0, p=0.788) or proportion with CAC ≥ 300 (70.0% vs 75.6%, p=0.699). Kaplan-Meier curves show significantly higher MACE for patients with previous stroke (log rank p=0.024). MACE was also higher for CAC ≥ 300 when compared to CAC 0 and CAC 1-299 (overall log rank p=0.046).
Conclusion: Elevated CAC and a history of stroke are significant predictors of future MACE in bronchospastic lung disease patients with a normal dobutamine SPECT MPI.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	03
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	THROMBOASPIRATION AND LEADLESS PACEMAKER IMPLANTATION IN A PATIENT WITH PACEMAKER INFECTIVE ENDOCARDITIS
Author Block:	Wassim Beladel, Karim Hasni, Caroline Birgy, Mohamed El Minaoui, Centre Hospitaliser Universitaire Souss Massa, Agadir, Morocco, Centre Hospitalier Toulon Sainte Musse, TOULON, France
Abstract Body:	**Background:** Pacemaker (PM) infective endocarditis (IE) is a severe type of right-sided IE with a low prevalence and high morbidity and mortality. **Case:** An 83-year-old implanted by a double chamber pacemaker, with a Kaposi syndrome history, hypertension, and a hip fracture was admitted for heel osteitis and Staphylococcus aureus bacteremia (SAB). Cardiac exploration revealed a 30mm tricuspid vegetation complicated by pulmonary embolism and multidrug-resistant Staphylococcus epidermidis. Given the patient's high surgical risk, vegetation percutaneous aspiration, pacemaker explantation, and reimplantation of a leadless PM were performed with a good follow-up. **Decision-making:** CIED infection significantly increases hospital length of stay, cost, and mortality. Patients with CIED and Staphylococcus aureus bacteremia are at high risk of having IE. TEE is more sensitive than TTE in RSIE. CIED extraction is indicated in SAB. For high surgical-risk patients with vegetation exceeding 20 mm, percutaneous aspiration before lead extraction is associated with a lower risk of complications.Re-implantation must be delayed until the infection has resolved. Leadless PM is considered a reimplantation strategy in patients undergoing CIED extraction for infection, and are at lesser risk of infection. **Conclusion:** A leadless PM is a safe option for patients with pre-existing CIED infection. Vegetation percutaneous aspiration for high-surgical-risk

patients before explantation is the safest choice.



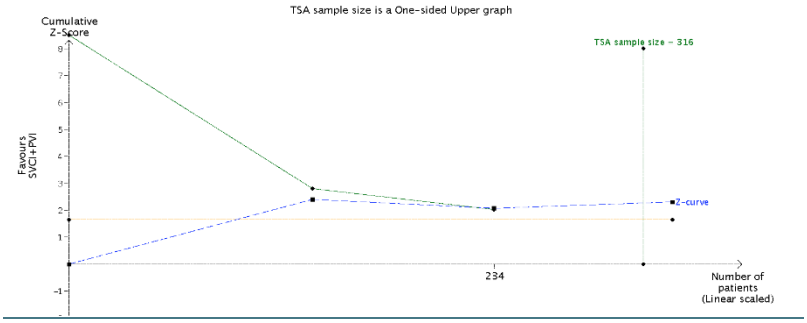
Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	04
Topic 1:	Cardiac Arrhythmias
Publishing Title:	AN IN-DEPTH ANALYSIS ON IMPLANTABLE CARDIOVERTER DEFIBRILLATOR PATIENTS WITH REMOTE MONITORING IN SINGAPORE
Author Block:	Hui Xin See Tow, Khi Yung Fong, Colin Yeo, Yue Wang, Vern Hsen Tan, National University of Singapore, Singapore, Singapore, Changi General Hospital, Singapore
Abstract Body:	**Background:** Remote monitoring (RM) is standard of care in managing patients with Cardiac Implantable Electronic Devices (CIED). This study aims to investigate whether compliance to RM in patients with CIED (Implantable Cardioverter Defibrillator [ICD] or Cardiac Resynchronisation therapy-Defibrillator [CRT-D]) affects long-term clinical outcomes. **Methods:** This was a prospective single centre cohort study of consecutive patients on RM with an ICD or CRT-D followed up from 2018-2024. For data analysis, patients were stratified according to whether they were compliant to RM. Compliance with RM was quantified as the proportion of patients enrolling in the RM system and transmitting data (scheduled or unscheduled) at least once a year. Primary outcome was all-cause mortality, secondary outcomes were hospitalisation for heart failure and device therapy (appropriate and inappropriate shocks and electrical storms). **Results:** We analysed 207 patients on RM, of whom 176 (85.0%) were compliant and 31 (15.0%) were non-compliant. Baseline demographics were mostly similar between both arms. There was a higher total number of transmissions among compliant compared to non-compliant patients per patient (18[11,31] versus 11[5,18], p=0.003). Among compliant compared to non-compliant patients, there were higher median scheduled transmissions (8[5,14] versus 5[1,8.5], p<0.001) and higher median unscheduled transmissions (7[2,17] versus 4[1.5,13], p=0.229),

although this was not statistically significant. Mortality was lower in the compliant group than in the non-compliant group (HR=0.02, 95%CI=0.004-0.08, p<0.001), which remained after adjustment for baseline covariates. Heart failure hospitalisation was lower in the compliant than in the non-compliant group (HR=0.36, 95%CI=0.15-0.85, p<0.001). There was no significant difference in device therapy (appropriate and inappropriate shocks and electrical storms) between compliant and non-compliant patients.

Conclusion: RM compliance was associated with significant lower mortality and heart failure hospitalisations, and this study emphasizes the importance of patient compliance to maximize the benefits of RM.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	05
Topic 1:	Cardiac Arrhythmias
Publishing Title:	SUPERIOR VENA CAVA ISOLATION IN ADDITION TO PULMONARY VEIN ISOLATION IMPROVES OUTCOMES IN PAROXYSMAL ATRIAL FIBRILLATION: A TRIAL SEQUENTIAL ANALYSIS
Author Block:	Wenchi Guan, Jun Liu, Keping Chen, Yao Yan, Fuwai Hospital, Chinese Academy for Medical Science, National Center for Cardiovascular Disease, Beijing, China
Abstract Body:	**Background:** Superior Vena Cava Isolation (SVCI) is a promising adjunct to Pulmonary Vein Isolation (PVI) for improving paroxysmal atrial fibrillation (PAF) ablation success. However, traditional meta-analyses have shown conflicting results. Trial Sequential Analysis (TSA) strengthens evidence by adjusting for random error and analyzing cumulative data, offering more definitive conclusions. We aim to evaluate the efficacy and safety of adding SVCI to PVI in PAF patients using TSA, a more robust statistical approach for cumulative evidence. **Methods:** We searched PubMed, EMBASE, Cochrane Library (CENTRAL), and Web of Science for randomized controlled trials (RCTs) comparing SVCI + PVI to PVI alone in PAF patients up to September 26, 2024. Two independent reviewers screened records, extracted outcomes, and assessed risk of bias. Data were analyzed using TSA (version 0.9.5.10 Beta). **Results:** Three RCTs with 332 patients were included. We assumed an atrial fibrillation recurrence rate of 16.7% for SVCI + PVI and 28.4% for PVI-only, based on previous studies, with 80% power and a 5% one-sided type I error rate. A sample size of 316 patients was required to detect a treatment effect. The cumulative Z-curve crossed both the traditional and sequential boundaries, favoring SVCI + PVI, indicating reliable and conclusive evidence.

Conclusion: TSA confirms that adding SVCI to PVI significantly improves outcomes in PAF ablation. The cumulative evidence supports its use in clinical practice.



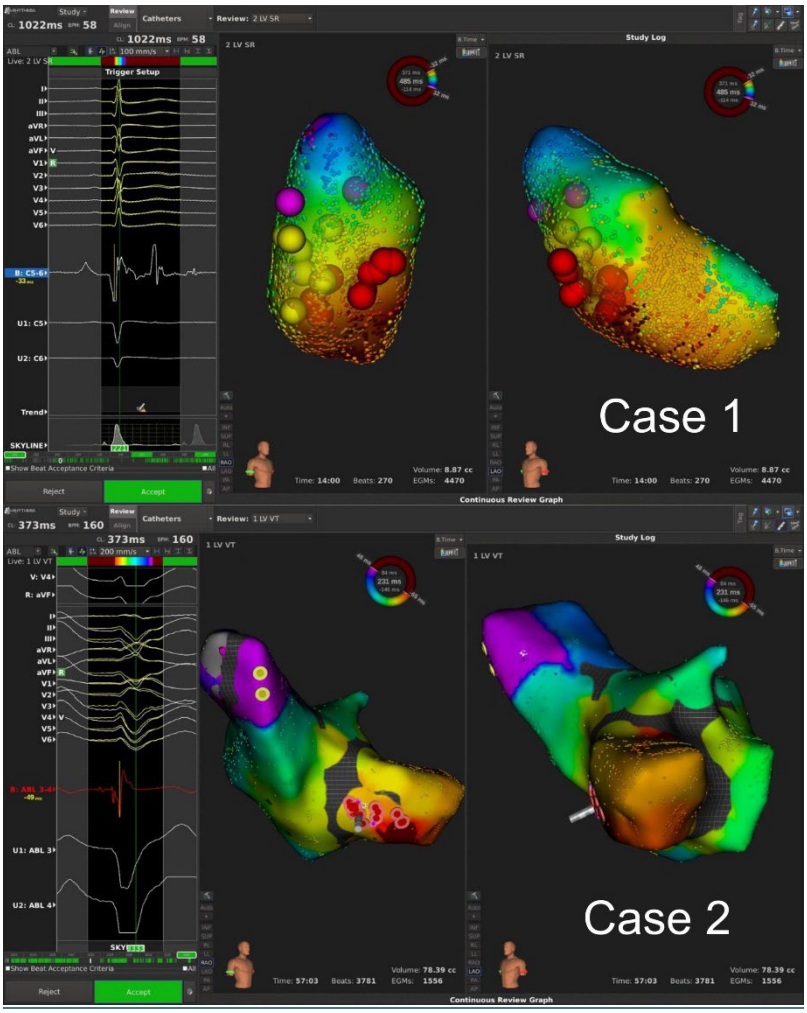
Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	06
Topic 1:	Cardiac Arrhythmias
Publishing Title:	VENTRICULAR TACHYCARDIA AFTER ACCIDENTAL INGESTION OF DELPHINIUM(NIRMASI) INGESTION: A CASE REPORT FROM NEPAL
Author Block:	Sanjeev Kharel, Prajwal Ghimire, Institute of Medicine, Tribhuvan University Teaching Hospital, Kathmandu, Nepal
Abstract Body:	**Background:** Nirmasi is a species of wildflower indigenous to Central Asia within the genus Delphinium. It is located between 8000 and 12000 feet above sea level in Nepal's mountainous and Himalayan areas.According to studies, delphinium's medicinal properties are derived from diterpenoid alkaloids.Less widely known is the risk that the same molecules could be harmful, causing symptoms ranging from fatal arrhythmias to gastrointestinal discomfort. **Case:** We here report a case of 47year male with fatal arrhythmias after ingestion of “Nirmasi herb”. This was Referred case from with history of consumption of herb 10-12 hours. He came to Emergency department as drowsy and disoriented. On examination, Glasgow Coma Scale of 5/15, respiratory rate of 24 breaths/min, a pulse rate of 140 bpm, blood pressure of 90/60 mmHg, and decreased oxygen saturation(76%) was seen. The man had monomorphic ventricular tachycardia (VT) on continuous telemetry. Immediate intubation was done.4 cycles of DC shock(200j) was given. **Decision-making:** Antiarrhythmic medicines were delivered (lignocaine injection followed by continuous infusion), as well as nor-adrenaline support, sodium bicarbonate, and magnesium sulphate. Patient was shifted to Coronary Intensive Care Unit.Meanwhile, the usual blood test results were consistently normal, and the troponin level was within normal limits, ruling out any ischaemic alterations or electrolyte imbalance. The

echocardiography revealed an essentially normal examination. The subsequent ECG examination revealed junctional beats, and the antiarrhythmic medications were withdrawn. Sinus rhythm was eventually re-established.

Conclusion: A rare case of poisoning can cause ventricular arrhythmias so clinicians should be vigilant on ingestion history.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	08
Topic 1:	Cardiac Arrhythmias
Publishing Title:	CURRENT CHALLENGES IN ELECTROPHYSIOLOGICAL MAPPING AND ABLATION OF IDIOPATHIC LEFT VENTRICULAR TACHYCARDIA CASES: DISCOVERING THE VALUABLE LESSONS FROM BOTH SUCCESS AND FAILURE
Author Block:	Aida Fahira Rachma, Adra Achirultan Ramainaldo Sugiarto, Nabila Rosalina Putri, Michael Jonathan, Rerdin Julario, Faculty of Medicine, Airlangga University, Surabaya, Indonesia, Department of Cardiology and Vascular Medicine, Faculty of Medicine, University of Airlangga, Surabaya, Indonesia
Abstract Body:	**Background:** Catheter ablation is the guideline-recommended treatment for Idiopathic Left Ventricular Tachycardia (ILVT). However, electrophysiological (EP) study and ablation of ILVT remain challenging due to its complex pathomechanism and high recurrence rate. **Case:** Two male Asians were diagnosed with ILVT and underwent catheter ablation using a 3D mapping system. Left posterior fascicle (LPF) origin was suspected in both cases. During the EP study, diastolic potential (P1) was identified in the first case during normal sinus, while P1 and Purkinje potential (P2) were found in the second case during VT. However, during recovery time, one case had a VT recurrence episode. **Decision-making:** Multiple RFAs were applied at the sites where P1 and P2 were recorded, although targeting P2 is more beneficial and carries a lower risk of complication. Both cases achieved successful acute termination of VT post-ablation. However, in the first case, the ablated fascicle was suspected to have caused VT recurrence. Further possible explanations include papillary muscle or upper septal VT and the proposed mechanism of LPF as a bystander. Additionally, shorter tachycardia cycle length can be a predictor of post-ablation recurrence.

Conclusion: Catheter ablation of ILVT possesses a high successful rate albeit recurrence due to similar fascicles is common. Differential diagnoses must be considered, including VT originating from structures adjacent to fascicle and other potential mechanisms such as LPF as a bystander.



Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	09
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	ANALYSIS OF THE CHARACTERISTICS OF MAXIMUM FAT OXIDATION RATE IN PATIENTS WITH CORONARY HEART DISEASE
Author Block:	Chenxi Xia, NA JIA, FANG WANG, Peking University Fifth School of Clinical Medicine, beijing, China, Beijing Hospital, beijing, China

Abstract Body:

Background: To explore the characteristics of the maximum fat oxidation rate in patients with coronary heart disease.

Methods: This study is a multicenter, cross-sectional study. Patients with coronary heart disease who underwent exercise cardiopulmonary test(CPET) at the Cardiology Department of Beijing Hospital and the Cardiac Rehabilitation Department of Cangzhou Central Hospital from May 2021 to December 2022 were selected. Clinical basic information and CPET data were collected. The CPET selected data on oxygen uptake (VO_2), power, oxygen pulse, and VE/VCO_2 at three stages: maximum fat oxidation rate, anaerobic threshold, and peak. Patients were divided into male and female groups according to gender. Based on whether the age was ≥65 years, they were divided into elderly and non-elderly groups. The differences in maximum fat oxidation rate, oxygen uptake, oxygen pulse, and VE/VCO_2 between the two groups were compared.

Results: A total of 400 patients were included in this study, including 279 males and 121 females, with an average age of 61.72±9.63 years. The results showed that there were significant differences in parameters such as VO_2, FATmax, power and oxygen pulse at the maximum fat oxidation rate between the male and female groups ($P<0.001$). The elderly group and the non-elderly group also showed significant differences in the maximum fat oxidation rate and its related parameters (such as VO_2, power, oxygen pulse). The maximum

fat oxidation rate of the elderly group was generally lower than that of the non-elderly group ($P<0.05$) .

Conclusion: Maximal fat oxidation rates differ significantly with gender and age in patients with coronary artery disease. The finding that elderly patients have lower fat oxidation capacity than younger patients. This finding may have important implications for the development of personalized exercise rehabilitation programs.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	10
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	: IN HOSPITAL OUTCOME OF INTRACORONARY VERSUS INTRAVENOUS TIROFIBAN INFUSION IN ST ELEVATION MYOCARDIAL INFARCTION (STEMI) PATIENTS UNDERGOING PRIMARY PERCUTANEOUS INTERVENTION (PCI) WITH HIGH THROMBUS BURDEN: A SINGLE CENTER EXPERIENCE
Author Block:	Debasis Panda, Debasish Dash, Ramachandra Barik, Debasis Acharya, Saroj Kumar Sahoo, All INDIA INSTITUTE OF MEDICAL SCIENCES, BHUBANESWAR, India
Abstract Body:	**Background:** Intracoronary or intravenous tirofiban infusion is administered in patients with acute ST elevation myocardial infarction (STEMI) with high thrombus burden during primary percutaneous intervention (PCI). In the present study, we retrospectively analysed the difference in hospital outcome between intracoronary and intravenous tirofiban infusion in STEMI patients who had undergone primary PCI with high thrombus burden. **Methods:):** A total of 64 cases, 32 cases in the intracoronary (IC) tirofiban infusion group and 32 cases in the intravenous (IV) tirofiban infusion group were retrospectively analysed in the present study. All the cases received tirofiban either as intracoronary (IC) bolus or intravenous (IV) infusion due to high thrombus burden during primary PCI. **Results:** Following treatment, TIMI flow grading improved in the intracoronary (IC) tirofiban group as compared to the intravenous (IV) tirofiban group (p = 0.012).Patients in intracoronary (IC) tirofiban group as compared with intravenous (IV) tirofiban group had lower incidence of intraprocedural arrhythmia [5(15.62%) cases vs 14cases(43.75%), p=0.013), lower incidence of intraprocedural hypotension [4cases(12.5%) vs 12cases(37.5%), p=0.01], lower incidence of periprocedural myocardial infarction [0 versus 4

cases(12.5%),p=0.014)], lower incidence of immediate stent thrombosis [0 vs 2cases(6.25%), p=0.02], and a lower incidence of heart failure [5 cases (15.62%) vs 11 cases (34.37%), p=0.037)]. There was no significant difference in any of the major adverse cardiac events (MACE) or major bleeding between two groups during hospital stay.

Conclusion: In patients with STEMI with high thrombus burden, intracoronary (IC) tirofiban administration when compared to intravenous (IV) route during primary PCI resulted in improved TIMI flow, lower incidence of intraprocedural arrhythmia and hypotension, lower periprocedural myocardial infarction, lower incidence of immediate stent thrombosis and lower heart failure incidence. There was no difference between two strategies on MACE or major bleeding risk.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	11
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	PATENT DUCTUS ARTERIOSUS STENTING AS A PALLIATIVE TREATMENT FOR NEONATES WITH PULMONARY ATRESIA AND INTACT VENTRICULAR SEPTUM
Author Block:	KENZO ADHI WIRANATA, ALFA ALFIN, BAGUS ARTIKO, SEBELAS MARET UNIVERSITY, SURAKARTA, Indonesia
Abstract Body:	**Background:** Pulmonary Atresia (PA) with Intact Ventricular Septum (IVS) is a rare heart anomaly that can be congenital. Patent Ductus Arteriosus (PDA) is a common form of a persistent duct, used as an abnormal pathway for blood flow from the heart to the lungs. PDA Stenting is a minimally invasive procedure and serves as an preference to surgical shunts in neonates with ductus-dependent pulmonary perfusion. **Case:** A 3-day-old premature neonates delivered by caesarean section from a 28 year-old primigravida mother, weighing 1500 grams exhibited cyanosis and increased respiratory effort on the third day of care. Physical examinations showed that APGAR score was 6-7, Downe Score 4 and SpO2 40%, The babygram showed a grade II Hyaline Membrane Disease (HMD) and TTE revealed PA IVS, PDA 1.3 mm with a vertical duct and bipartite RV. Treatment included intravenous injections of antibiotic, intravenous heparin, alprostadil, aspirin and PDA Stenting measures. After the treatment, she showed a significant clinical improvement in arterial saturation, with SpO2 reaching 80%, and pulmonary vascular marking. **Decision-making:** The patient underwent PDA Stenting with a diameter of 3.00 mm x 12 mm and achieved significant clinical improvement. **Conclusion:** PDA stenting is considered feasible, safe and associated with lower mortality rates. PDA stenting in patient with duct-dependent pulmonary circulation appeared to be an alternative to surgery. It provided bridging

palliation until the time of definitive surgery.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	12
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	THE IMPACT OF HIGH-SENSITIVITY CARDIAC TROPONIN LEVELS IN EARLY RISK STRATIFICATION FOR ACUTE MYOCARDIAL INFARCTION: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Emil Lewin, Noel Allan, Rohit Manikandan Nair, Dr SMCSI Medical college, Trivandrum, India
Abstract Body:	**Background:** High-sensitivity cardiac troponins (hs-cTn) have revolutionized acute MI (AMI) diagnosis by enabling highly accurate detection of myocardial injury. Their use improves risk stratification, particularly in early and non-STEMI cases. This meta-analysis examines hs-cTn's diagnostic and prognostic utility to enhance AMI management globally. **Methods:** Data from 15 studies involving 12,432 patients with suspected AMI were pooled. Diagnostic performance metrics, including sensitivity, specificity, and (AUC), were analyzed. Prognostic outcomes, such as 1-year mortality and recurrent ischemic events, were assessed using hazard ratios (HR) and relative risks (RR). Subgroup analyses evaluated diagnostic accuracy by clinical presentation (STEMI vs. NSTEMI) and time from symptom onset (<2,2-6,>6 hours). Statistical heterogeneity was assessed using I^2 statistics, and publication bias was evaluated through funnel plots. **Results:** The pooled sensitivity of hs-cTn was 94.8% (95% CI: 93.1%-96.0%) and specificity 87.3% (95% CI: 84.1%-90.2%), with an AUC of 0.94 (95% CI: 0.92-0.96). Sensitivity increased from 88.7% within 2 hours of symptom onset to 96.3% after 6 hours, while specificity remained stable (87%). Patients with hs-cTn levels ≥0.10 µg/L had a 1-year mortality rate of 12.4% compared to 4.1% for lower levels (HR: 3.08; 95% CI: 2.12-4.49). Elevated hs-cTn was also associated with recurrent ischemic events (RR: 2.13; 95% CI: 1.75-2.59). Subgroup analyses showed higher sensitivity in STEMI (96.1%) than NSTEMI

(91.4%), with similar specificity (87.9% vs. 86.6%). Moderate heterogeneity was observed in diagnostic (I^2 = 34.6%) and prognostic (I^2 = 41.3%) outcomes. **Conclusion:** This meta-analysis confirms hs-cTn's exceptional diagnostic and prognostic value in AMI, particularly in early and non-STEMI presentations. Integrating hs-cTn into global guidelines can improve resource use, reduce costs, and streamline triage. However, challenges in standardizing thresholds across populations and resource-limited settings persist. Addressing these disparities will maximize hs-cTn's global impact on AMI care.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	13
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	THE ASLANGER PATTERN:'THE PIPER AT THE GATES OF DAWN'.
Author Block:	Anuj Darak, Prashant BHARADWAJ, Ravi Kalra, BHARATI VIDYAPEETH UNIVERSITY MEDICAL COLLEGE,PUNE, PUNE, India

Abstract Body:

Background: Aslanger et al.; in 2020, identified occlusive inferior myocardial infarction that may not conform to the conventional ST Elevation Myocardial Infarction criteria.

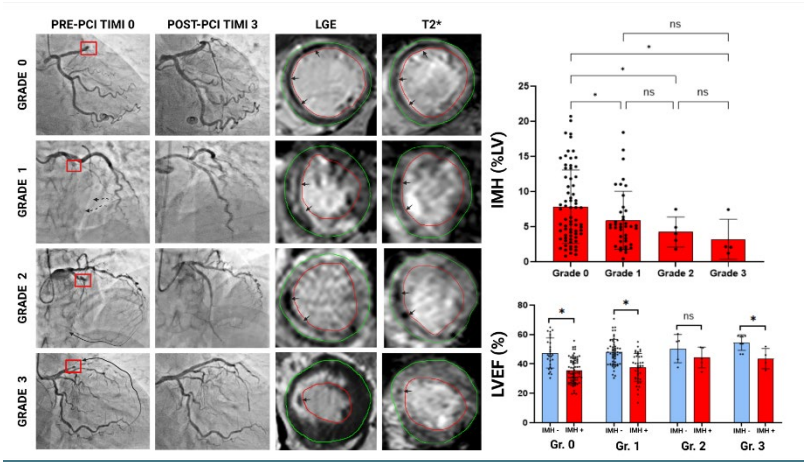
Methods: We studied a cohort of twenty patients who presented with anginal chest pain of varying durations and displayed the distinctive Aslanger pattern on ECG.These cases underwent an emergent trans-thoracic echocardiography,coronary angiography(CAG) and mandated revascularisation.

Results: ECG of all twenty cases revealed the Aslanger pattern:(i)ST Elevation in lead III but not in other inferior leads,(ii)ST depression in any of leads V4 to V6 but not in V2,(iii)ST elevation in lead V1.Echocardiography reflected a spectrum of Left ventricular ejection fraction.On immediate CAG,the Left main coronary artery was involved in seven cases,out of which six patients had associated triple vessel disease and one patient had associated double vessel involvement.The left anterior descending coronary artery(LAD)was involved in twelve patients,with the majority having the involvement of the proximal LAD.The Left circumflex coronary artery(LCX)was affected in eleven subjects,with most cases portraying proximal involvement.Ten patients had affection of the right coronary artery (RCA),majority showing lesions of the mid-RCA.Post CAG,fourteen patients proceeded with angioplasty.Six cases required Coronary artery bypass Grafting due to a high SYNTAX score.

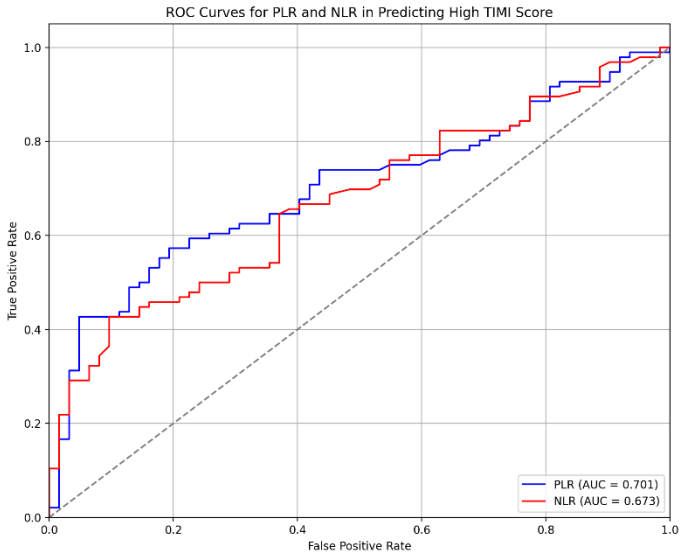
Conclusion: The Aslanger pattern originally pertained to an occlusive inferior myocardial infarction secondary to involvement of the RCA or LCX.In our study, the majority of cases had multivessel disease with the left main coronary artery involvement in 35 percent of cases.This brings to light the vitality of recognising this pattern for urgent angiographic assessment and indicated revascularisation.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	14
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	CORONARY COLLATERALS MITIGATE HEMORRHAGIC MYOCARDIAL INFARCTION IN REPERFUSED MI
Author Block:	Keyur P. Vora, Kinjal Niranjan Bhatt, Tejas Pandya, Vishal Anand Poptani, Shrenik Doshi, Rohan Dharmakumar, Synergy Superspecialty Hospital, Rajkot, India, Indiana University School of Medicine, Indianapolis, IN, USA
Abstract Body:	**Background:** Hemorrhagic myocardial infarction affects 35-50% of reperfused ST-elevation MI patients, resulting in larger infarcts, pronounced adverse LVremodeling, and significantly increased risk for MACE. We investigated whether coronary collaterals provide cardioprotection through reducing intramyocardialhemorrhage (IMH) volume and its contribution to myocardial injury in post-PCI STEMI patients. **Methods:** The MIRON-CL trial (NCT05898425) prospectively enrolled 294 STEMI patients who underwent PCI. Collateral vessels (Rentrop grading 0-III) weredetermined from pre-PCI angiography . On day 3 post-PCI, patients underwent CMR for assessment of IMH (T2* maps) and MI volume (LGE as %LV). IMHvolumes were compared between patients with (Grades I-III) and without (Grade 0) collaterals. **Results:** Of 294 patients, 124 developed hemorrhagic MI. Patients without collaterals (Grade 0) had significantly larger IMH volumes (7.41 ± 5.33% LV) comparedto those with collaterals (Grade I: 5.23 ± 3.21%, Grade II: 3.11 ± 2.78%, Grade III: 2.05 ± 1.89%, $p<0.001$). Collaterals were also linked to reduced MI size (CL-:38.66 ± 14.63% vs. CL+: 19.84 ± 13.72%, $p<0.001$) and lower MVO volumes (CL-: 8.07 ± 6.60% LV vs. CL+: 2.17 ± 2.35% LV, $p<0.001$). **Conclusion:** Coronary collaterals reduced IMH volume, MVO size, and MI size post-PCI. Collateral grading provides valuable insight into risk

stratification,guiding optimized management and improving outcomes in revascularized STEMI patients.

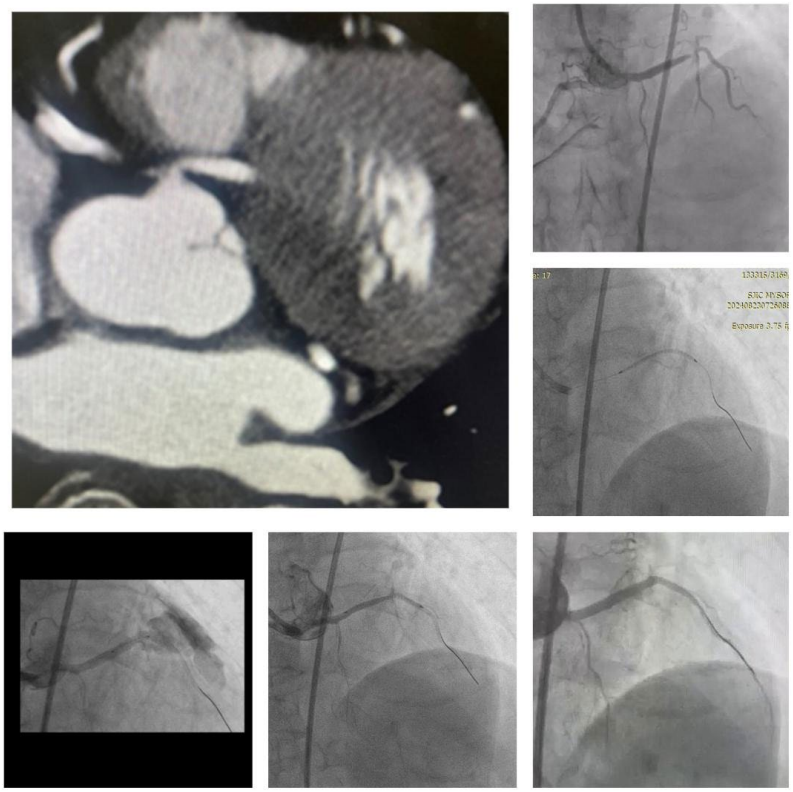


Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	15
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	PROGNOSTIC VALUE OF PLATELET TO LYMPHOCYTE RATIO AND NEUTROPHIL TO LYMPHOCYTE RATIO IN RISK ASSESSMENT OF STEMI PATIENTS UNDERGOING PCI: A COMPARATIVE STUDY WITH TIMI RISK SCORE
Author Block:	Benedicto Teofilos, Nizamuddin Ubaidillah, Arinta Setyasari, Sherly Yosephina, Dustira Military Hospital, Cimahi, Indonesia
Abstract Body:	**Background:** Effective risk assessment in patients with ST-Elevation Myocardial Infarction (STEMI) undergoing Percutaneous Coronary Intervention (PCI) is crucial for improving clinical outcomes. While traditional tools like TIMI scores provide a baseline, their sensitivity in predicting adverse outcomes is limited. Emerging inflammatory markers, including Platelet- to-Lymphocyte Ratio (PLR) and Neutrophil-to-Lymphocyte Ratio (NLR), show promise in refining predictive accuracy. **Methods:** This retrospective study analyzed STEMI patients treated at Dustira Military Hospital from June 2023-June 2024. PLR and NLR levels were collected and compared against TIMI scores using ROC curves, with key outcomes being mortality and major adverse cardiac events. **Results:** PLR (cutoff: 17.07) and NLR (cutoff: 6.02) exhibited high specificity (95.16% and 90.32%) but moderate sensitivity (~45.83%) in identifying high-risk cases (TIMI ≥ 7). PLR demonstrated superior accuracy (73.64%) and positive predictive value (88%) over NLR (70.91% and 78.57%).



Conclusion: These findings suggest that incorporating PLR and NLR into routine assessments could provide solutions for resource-limited healthcare settings. However, their moderate sensitivity implies these markers are best used in conjunction with other tools. Further multicenter research is recommended to validate these results and explore the utility of combining inflammatory markers with other methods for comprehensive risk evaluation.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	16
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	PCI GONE AWRY IN A RARE CASE OF ANOMALOUS LEFT CORONARY ARTERY FROM RIGHT SINUS
Author Block:	Veena Nanjappa, TANYA BATRA, Sadananda K . S, Madhuprakash Soekaidoddi Chikkamadegowda, Dr. Muralidhara Danappa Patel, sri jayadeva institute of cardiovascular sciences and research, mysore, India
Abstract Body:	**Background:** The incidence of left main coronary artery (LMCA) originating from the right sinus is 0.15% . **Case:** A 66 year old gentleman was admitted with Non ST elevation myocardial infarction(NSTEMI).Coronary angiogram done showed anomalous origin of LMCA from right coronary cusp with distal trifurcating LMCA 95% stenosis. Left anterior descending artery (LAD) was of small calibre with ostial 95% stenosis. First Diagonal was a good sized vessel with ostial 95% stenosis.CTCAG showed the aberrant course to be sub-pulmonic with the lesion located in the atrio-ventricular groove.



Decision-making: Heart team decision was taken. In view of frailty and left ventricular dysfunction and small calibre LAD which was not feasible for grafting,he was planned for Percutaneous coronary intervention (PCI) from LMCA to Diagonal.Right femoral artery approach taken , pre-dilation done with semi compliant balloon followed by Cutting balloon . Everolimus drug eluting stent deployed with TIMI III flow, following postdilation extensive grade III ellis perforation noted .Emergency pericardiocentesis and continous autotransfusion performed and Covered stent deployed ,the perforation was distal to the stent deployed therefore patient shifted for emergency CABG.Post-operatively, he was extubated on day five, stabilized, and discharged a week later

Conclusion: PCI in cases of anomalous left coronary artery from right sinus can be effective, but it does come with unique challenges.

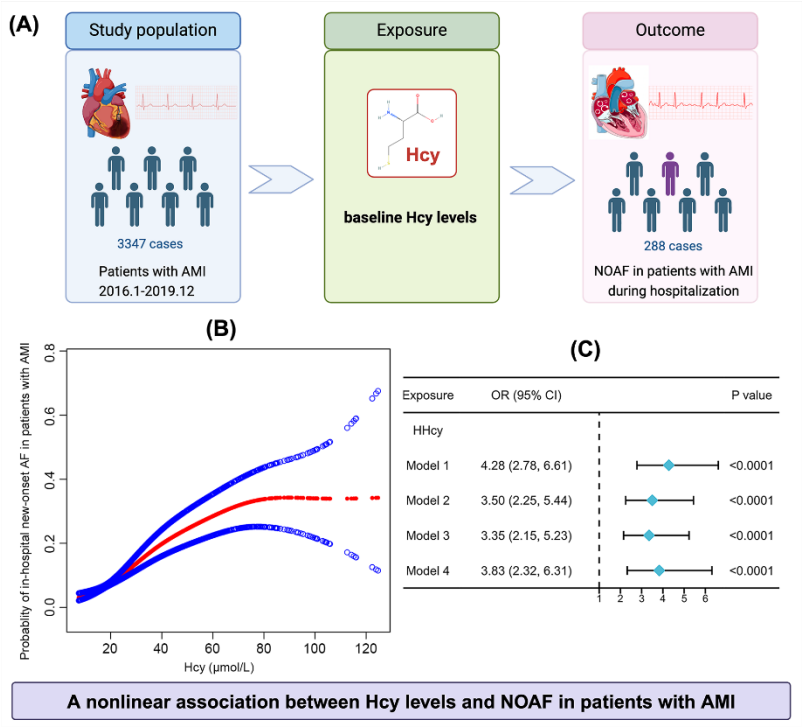
Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	17
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	CREATININE-TO-ALBUMIN RATIO AND 28-DAY MORTALITY AMONG INTENSIVE CARE PATIENTS WITH ACUTE MYOCARDIAL INFARCTION: A MULTICENTER RETROSPECTIVE ANALYSIS
Author Block:	Ping Jin, Huijuan Kou, Qiangsun Zheng, The Second Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China
Abstract Body:	**Background:** The creatinine-to-albumin ratio (CAR) has been associated with adverse outcomes in various clinical settings. However, its relationship with mortality in critically ill patients with acute myocardial infarction (AMI) remains unclear. **Methods:** In this retrospective cohort study using the eICU Collaborative Research Database, we analyzed data from 2,726 AMI patients admitted to ICU. CAR was calculated using measurements obtained within the first 24 hours of ICU admission, and patients were stratified into tertiles based on CAR levels. The outcome was 28-day ICU mortality. Cox proportional hazards models, nonlinear relationship analysis, subgroup analysis, and mediation analysis and multiple imputation were performed. **Results:** The 28-day ICU mortality rate was 8.034% (219 patients). Each unit increase in CAR was associated with increased mortality risk (adjusted HR=1.945). Compared with the low CAR group, the high CAR group showed significantly increased mortality risk (adjusted HR=2.133). These associations remained consistent in multiple imputation analyses. Generalized Additive Model analysis revealed a nonlinear relationship between CAR and mortality, with a threshold effect at CAR=1.089. Before this threshold, CAR showed a significant positive association with mortality (HR=3.969, P<0.001). Subgroup analyses demonstrated the consistency of these associations across various patient characteristics. Mediation analysis

revealed that heart rate partially mediated (4.81%) the relationship between CAR and mortality. Kaplan-Meier analysis showed significantly lower survival probability in the high CAR group.

Conclusion: In critically ill patients with AMI, this study identified a nonlinear association between CAR and 28-day mortality, characterized by a threshold effect. The relationship between CAR and mortality was particularly pronounced below a certain threshold value, after which it plateaued. This association remained consistent across various subgroup analyses and was partially mediated by heart rate. These findings provide new insights into the complex relationship between CAR and mortality in critically ill patients with AMI.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	18
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	NONLINEAR RELATIONSHIP BETWEEN HOMOCYSTEINE AND IN-HOSPITAL NEW-ONSET ATRIAL FIBRILLATION IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION
Author Block:	Ping Jin, Peng Wu, Juan Ma, Xueping Ma, Shaobin Jia, Qiangsun Zheng, The Second Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China, General Hospital of Ningxia Medical University, Yinchuan, China
Abstract Body:	**Background:** Homocysteine (Hcy) is a risk factor of cardiovascular diseases. However, relationship between Hcy and in-hospital new-onset atrial fibrillation (NOAF) among patients with acute myocardial infarction (AMI) remains uncertain. **Methods:** We conducted a retrospective cohort study, involving 3,347 patients with AMI. Participants were categorized into tertiles on Hcy levels during admission, and the outcome was the incidence of NOAF. Logistic regression models were employed to explored the associations between Hcy and NOAF when adjusting for potential confounders. Non-linear relationships were explored using generalized additive models and threshold effect analyses. Stratified analyses were performed to explore the robustness and potential interaction effects of other clinical factors on Hcy-NOAF relationship. **Results:** Higher Hcy was associated with a greater risk of in-hospital NOAF across all models (OR: 1.03, $P < 0.001$). GAM analyses revealed a nonlinear association with a steeper increase in NOAF risk at higher Hcy levels. Threshold effect analysis identified a turning point at 34.27μmol/L and below this point the association between Hcy and NOAF was stronger. Stratified analyses indicated a stronger in patients with smaller left atrial anterior-posterior diameter(LAAD).

Conclusion: A nonlinear association has been identified between elevated Hcy and the likelihood of in-hospital NOAF among patients with AMI, particularly among those with smaller LAAD.



Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	19
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	TAKAYASU ARTERITIS PRESENTING WITH MULTIPLE ABDOMINAL AORTIC PSEUDO-ANEURYSM
Author Block:	Saroj Kumar Sahoo, Ramachandra Barik, Siddhartha Sathia, Debasis Acharya, Pranjit Deb, Sindhu Rao Malla, Debasis Panda, ALL INDIA INSTITUTE OF MEDICAL SCIENCE, Bhubaneswar, India
Abstract Body:	**Background:** A 27-year-old female presented with intermittent fever, weight loss, and exertional dyspnoea for three months. She was diagnosed with Takayasu arteritis, with an ACR-EULAR score of 10 and ITAS score of 15. Treatment included oral steroids and azathioprine. **Case:** CT angiography showed multiple infra-renal abdominal aorta aneurysms, with the largest at 2.3 x 2.6 cm, and stenosis in the right common iliac artery(figure 1A). PET scan showed inactive diseases(Figure 1B). The patient was planned a hybrid procedure involving EVAR and a femoral-femoral crossover bypass. **Decision-making:** The left radial artery was accessed for baseline imaging of the aneurysm. A stent graft (16x13x156) was deployed(figure 1C), and a femoral-femoral crossover bypass with a PTFE graft was performed(figure 1D). At the one-month follow-up, CT angiography showed successful aneurysm exclusion but noted a type 2 endoleak(figure 1E). During the procedure to address the endoleak, no contrast filling was observed, but multiple collaterals were noted(figure 1F). The plan is to continue follow-up with another CT angiography in 3 months. **Conclusion:** Takayasu arteritis rarely presents with multiple abdominal aortic aneurysms. This case involved a hybrid procedure involving combined EVAR and crossover femoral-femoral graft, which was successfully managed by a

team of interventional cardiologists, vascular surgeons, and cardiac anesthesiologists.

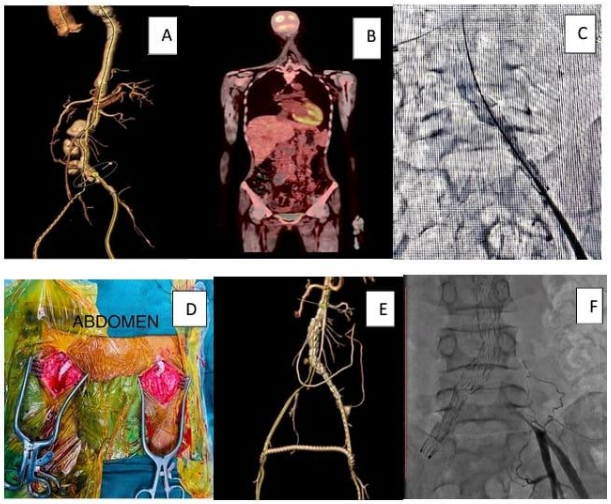


Figure 1 Details of the patient: A) baseline CT angiogram showing multiple pseudoaneurysms in abdominal aorta involving both common iliac artery and significant stenosis in right iliac artery, procedural; B) PET showed no disease activity; C) Cine showing Stent graft deployed from infrarenal aorta to left common iliac artery; D) Femoro-femoral cross over PTFE graft; E) Follow up CT angiogram showed exclusion of pseudoaneurysm, patent PTFE graft with type 2 endo-leak; F) Cine showed no endoleak from right side contrast injection.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	21
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EVALUATING THE SAFETY AND EFFICACY OF VERICIGUAT IN HEART FAILURE WITH PRESERVED OR REDUCED EJECTION FRACTION: AN UPDATED SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS
Author Block:	Ibrahim Khalil, M Rafiqul Islam, Md Ekramul Islam, AKM Mushfiquzzaman, Manisha Das, Afsana Rahman Maliha, Sunjida Amin Promi, Sakib Abrar, Dhaka Medical College and Hospital, Dhaka, Bangladesh, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh
Abstract Body:	**Background:** Vericiguat is a novel soluble guanylate cyclase stimulator that has shown promise in improving outcomes for patients with heart failure (HF). Despite initial studies demonstrating potential benefits, its safety and efficacy remain a subject of ongoing investigation. This study aims to provide a comprehensive evaluation regarding the impact of Vericiguat in HF patients. **Methods:** We searched PubMed, Cochrane Library, Scopus, and ClinicalTrials.gov for trials comparing Vericiguat to placebo in HF patients. A total of 8 trials from 145 studies were included. Statistical analysis used a random-effect model to calculate the risk ratio (RR) and a 95% confidence interval (CI) with p-value <0.05 was considered significant. **Results:** A total of 22,704 patients were ultimately included. This study showed that Vericiguat compared to placebo decreased cardiovascular mortality by 0.91 (RR, 0.95% CI; 0.85-0.98, p= 0.019), all-cause mortality 0.95 (RR, 0.95% CI; 0.87-1.04, p= 0.225), hospitalization for HF 0.91 (RR, 0.95% CI; 0.89-0.93, p<0.00001) and incidence of serious adverse effects 0.94 (RR, 0.95% CI; 0.88-1.00, p= 0.058). Vericiguat also caused non-significant increase in hypotension 1.11 (RR, 0.95% CI; 0.98-1.26, p= 0.074) and syncope 1.15 (RR,

0.95% CI; 0.80-1.64, p= 0.308).

Conclusion: This study demonstrates Vericiguat significantly reduces cardiovascular mortality, hospitalization for HF and serious adverse effects, supporting its potential clinical benefit in patients with HF.

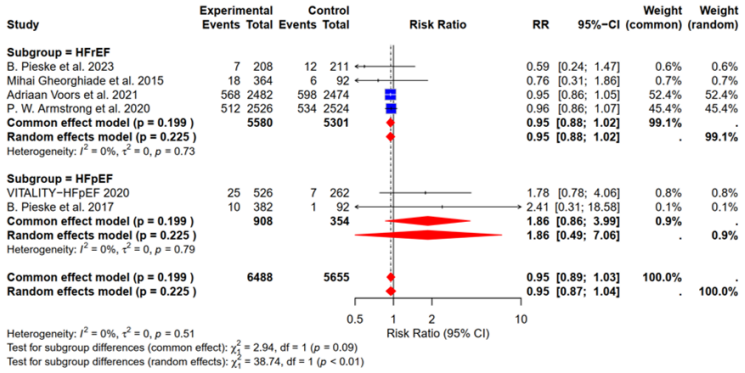


Fig 1: Forest plot of all cause-mortality

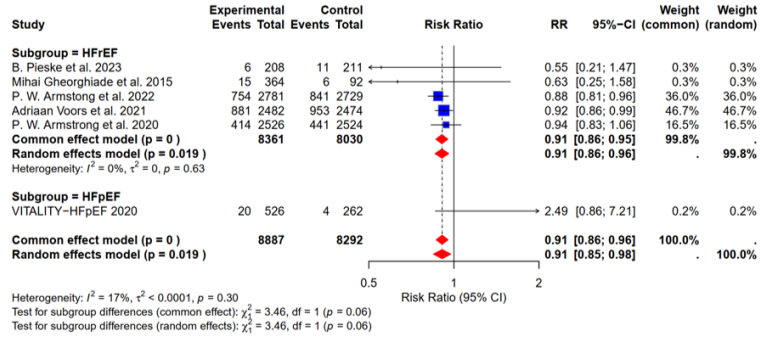


Fig 2: Forest plot of cardiovascular mortality

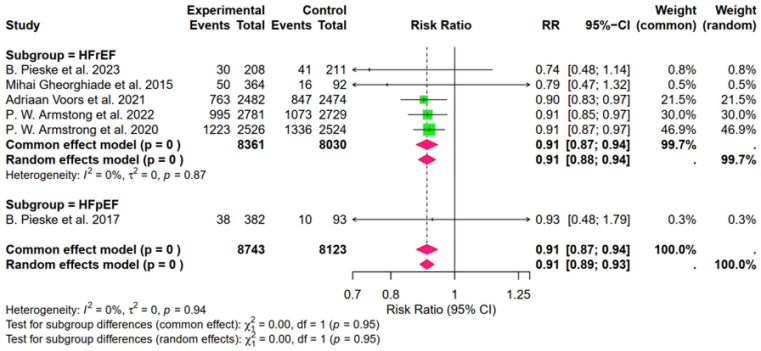


Fig 3: Forest plot of hospitalization for heart failure

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	22
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	ASSOCIATION OF SERUM LEVEL OF INTERLUKEIN-33 IN HEART FAILURE VS HEALTHY POPULATION ATTENDING A TERTIARY HEALTH CARE CENTRE-AN OBSERVATIONAL STUDY
Author Block:	Debasis Panda, Debasis Dash, All INDIA INSTITUTE OF MEDICAL SCIENCES, BHUBANESWAR, India
Abstract Body:	**Background:** The role of immunity in pathogenesis of heart failure is not well established. We performed an observational study regarding the difference in serum levels of Interleukin 33 in heart failure and healthy patients and diagnostic potential of Interleukin 33. **Methods:** Adult patient more than 18 years with diagnosis of heart failure were taken in this observational study after meeting inclusion and exclusion criteria. We analysed 200 subjects and divided them into two groups A (heart failure patients) and B (healthy subjects not having heart failure) with 100 in each group. Statistical analysis was performed to compare serum Interleukin 33 levels, to assess demographic characteristics and role of Interleukin 33 in assessing prognosis was studied. **Results:** The median (IQR) of Interleukin 33 in the group A and B were 470.5pg/ml (419.25- 484.25) and 525 pg/ml (513-565) respectively. There was a significant difference between the 2 groups in terms of Interleukin 33 (P=<0.001), with the median Interleukin 33 being highest in the group B. The area under the ROC curve (AUROC) for Interleukin 33 predicting group: A vs group: B was 0.941 (95% CI: 0.862 - 1), thus showed excellent diagnostic potential. It was statistically significant (p =<0.001) and at a cutoff of Interleukin 33 ≤493pg/ml, it predicted group: A with a sensitivity of 88%, and a specificity of 100%. **Conclusion:** We found that concentration of Interleukin 33 was much lesser

in heart failure population compared to healthy subjects which emphasized the beneficial effect of Interleukin 33. system. These results could help in formulation of more RCT s, help in developing molecules targeting Interleukin 33 /suppression of tumorigenicity 2 system and newer treatment strategies in treatment of heart failure.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	23
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	USING OF SPOT URINE SODIUM AS GUIDANCE ON DIURETICS TREATMENT COMPARE WITH STANDARD OF CARE TO REDUCEDDAY OF CONGESTION IN PATIENTS WITH HEART FAILURE HOSPITALIZATION IN BHUMIBOL ADULYADEJ HOSPITAL. (RANDOMIZED CONTROLLED TRIAL)
Author Block:	Jarusit Jangsawang, Manasawee Indrabhinduwat, Bhumibol Adulyadej hospital, Bangkok, Thailand
Abstract Body:	**Background:** Optimal diuretic dosing in acute heart failure (AHF) remains challenging. While low urine sodium levels are associated with poor diuretic response and adverse outcomes, the clinical utility of urine sodium-guided diuretic adjustment in routine AHF management is unclear. This study evaluated the efficacy of a urine sodium-guided diuretic protocol compared to standard of care. **Methods:** This randomized controlled trial enrolled 150 hospitalized patients with AHF. Patients were randomized to either a urine sodium-guided diuretic protocol (adjusting loop diuretic dosage based on urine sodium <70 mEq/L) or standard treatment. The primary outcome was the duration of pulmonary congestion. Secondary outcomes included daily urine output, 30-day readmission rates, and changes in serum creatinine. **Results:** No significant difference was found in the duration of pulmonary congestion between the urine sodium-guided group [3 days, IQR (2-4)] and the standard treatment group [3 days, IQR (2-4)]; p=0.057. There were also no significant differences in daily urine output or 30-day readmission rates. However, the urine sodium-guided group demonstrated a statistically significant reduction in the change in serum creatinine levels compared to the standard treatment group [0.02, IQR (-0.09-0.230) vs 0.22, IQR (0.01-

0.460]; (p=0.008).
Conclusion: This study demonstrates that a urine sodium-guided diuretic protocol does not significantly reduce the duration of pulmonary congestion in patients with AHF compared with standard care. However, the significant reduction in creatinine change suggests a potential renal protective effect of this approach. Further investigation is warranted to explore the long-term benefits and identify patient subgroups who may benefit most from this strategy.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	25
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	REAL WORLD DATA ON INITIATION OF COMBINATION THERAPY FOR PULMONARY ARTERIAL HYPERTENSION PATIENTS WITH MULTIPLE COMORBIDITIES
Author Block:	Giok Qin Ng, Kwang How Mok, Tan Tock Seng Hospital, Singapore, Singapore
Abstract Body:	**Background:** The subgroup analysis from the AMBITION study revealed that the discontinuation rate of pulmonary arterial hypertension (PAH) therapy in the ex-primary analysis set (Ex-PAS) group is doubled compared to the primary analysis set (PAS) group of patients without cardiovascular comorbidities. For patients with multiple comorbidities, the 2022 European Society of Cardiology Pulmonary Hypertension guideline recommends initiation with PAH monotherapy and additional therapy to be individualized. However, guidance on patient selection, timing of initiation, dose selection and concomitant diuretic therapy is lacking. **Methods:** A retrospective analysis of the Tan Tock Seng Hospital patient database on combination PAH therapy was performed. Patients were initiated on sildenafil 25mg three times a day at diagnosis and ambrisentan 5mg once daily within 2-4 weeks. Ambrisentan was titrated to the maximum tolerated dose with diuretics optimized as needed. **Results:** Between January 2020 - December 2023, 47 patients were initiated on combination PAH therapy. Nine patients had previous left heart disease (LHD) or latent LHD revealed on exercise right heart catheterization [LHD group], 8 patients had ≥ 3 heart failure with preserved ejection fraction (HFpEF) risk factors [Ex-PAS group], and 30 patients had < 3 HFpEF risk factors [PAS group]. Ambrisentan 10mg was achieved in 90%, 50% and 44% in

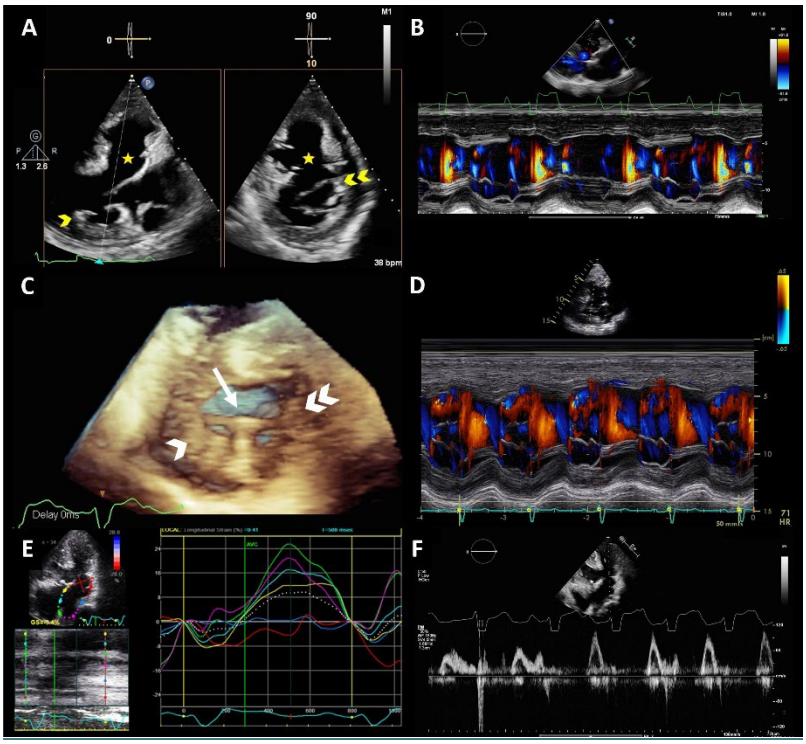
the PAS, Ex-PAS and LHD group respectively. Diuretics were initiated or intensified in 50% of the PAS and Ex-PAS group, and 77.8% of the LHD group, within 2 weeks. Discontinuation rates were lower in this study (0% PAS, 12.5% Ex-PAS) compared to the AMBITION study (14% PAS, 33% Ex-PAS). Within 3-6 months of maximum tolerated ambrisentan, 33%, 12.5% and 44% in the PAS, Ex-PAS and LHD group respectively had an improvement in the PAH risk.
Conclusion: Combination PAH therapy can be well-tolerated even in patients with cardiovascular comorbidities with close monitoring and early fluid status optimization. Patients who tolerate the therapy may improve their PAH risk scores. Diuretic optimization is relevant for all PAH patients, regardless of comorbidities, especially in the first 2 weeks of initiation of ambrisentan.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	26
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	RELATIONSHIP BETWEEN BRANCHED CHAIN AMINO ACIDS LEVELS AND CARBOHYDRATE METABOLISM DISORDERS IN PATIENTS WITH CHRONIC HEART FAILURE
Author Block:	Vita Zektser, Maria Petrukhnova, Maria Kozhevnikova, Boldin Andrey, Appolonova Svetlana, First Moscow Medical University named by I.M. Sechenov, Moscow, Russian Federation
Abstract Body:	**Background:** BCAA include leucine, isoleucine, and valine. They are the basis for polypeptide chains and are important in the metabolism of carbohydrates and lipids. In the process of BCAA metabolism, acetyl-CoA and succinyl-CoA are formed. These substances are a substrate for the synthesis of nicotinamide adenine dinucleotide. In patients with CHF and CMD - an imbalance in the processes of glycolysis and oxidation of fatty acids is noted. This leads to the accumulation of intermediate products of BCAA metabolism, cytotoxicity and to systolic or diastolic dysfunction. **Objective:** to assess the level of BCAA in patients with CHF and CMD compared to ones with CHF without CMD, to study these changes and their potential therapeutic and diagnostic use. **Methods:** 218 patients were divided into 2 groups: grope 1 - with CHF and CMD (133); group 2 - with CHF without carbohydrate metabolism disorders (85). ECHO-CG, NTproBNP, blood glucose levels and glycated hemoglobin levels were determined and analyzed, BCAA in the blood plasma were determined by high-performance liquid chromatography and mass spectrometry. The data were indexed with an adjustment for age, so the studied values are both positive and negative. **Results:** It was found that in group 1 were higher levels of BCAA - the concentration of leucine and isoleucine in this group was 40 [10;28] μM, and in the group 2 - 17 [24;54] μM ($p = 0.022$). This pattern was found for

valine - group 1 had a higher level of valine (4 [-6;13]μM), while group 2, had lower (-23 [-10;-36] μM). A direct relationship between leucine + isoleucine and glucose (r=0,3, p<0,001) and an inverse relationship between valine and NTproBNP (r=-0,388, p<0,001) were found.
Conclusion: It has been established that a high level of tissue insulin resistance is associated with increased concentrations of BCAA in with CHF. When choosing a treatment for patients with the with CHF and CMD preference should perhaps be given to drugs aimed, at enhancing the catabolism of BCAA. Future studies are required to determine whether increased BCAA catabolism helps improve glycemic control and CHF in people with CHF and CMD.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	27
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	THE FIRST LEADLESS PACEMAKER IN TRANSPOSITION OF THE GREAT ARTERIES
Author Block:	Tse-Wei Chen, Ju-Yi Chen, National Cheng Kung University Hospital, Tainan, Taiwan
Abstract Body:	**Background:** Patients with unrepaired dextro-transposition of the great arteries are at high risk for cardiac bradyarrhythmia due to progressive conduction system abnormalities inherent to their congenital anatomy. Leadless pacemakers are an emerging alternative, offering a minimally invasive solution with reduced infection risk and no requirement for a subcutaneous pocket or transvenous leads. **Case:** A 37-year-old uremic lady with unrepaired dextro-transposition of the great arteries (d-TGA) presented with symptomatic high-degree atrioventricular (AV) block. Her complex d-TGA incorporated with bidirectional shunting of a large ventricular septal defect (VSD). Left-to-right shunting accounted for the oxygenated flow toward systemic circulation. She recovered with conventional dual chamber pacemaker implantation. However, it was removed after infected generator pocket within two months. Due to comorbidities and high infection rate, leadless pacemaker was suggested. **Decision-making:** Initially, we opted for traditional septal pacing due to its procedural efficiency. Additionally, we evaluated which chamber: anatomical right ventricle (RV) or left ventricle (LV), would be optimal for pacing. Ultimately, we implanted the leadless pacemaker in the RV, which functionally corresponds to the LV. **Conclusion:** This is the first case report of a patient with unrepaired d-TGA with coexisting large VSD who successfully received Micra™ AV

implantation for symptomatic high-degree AV block.

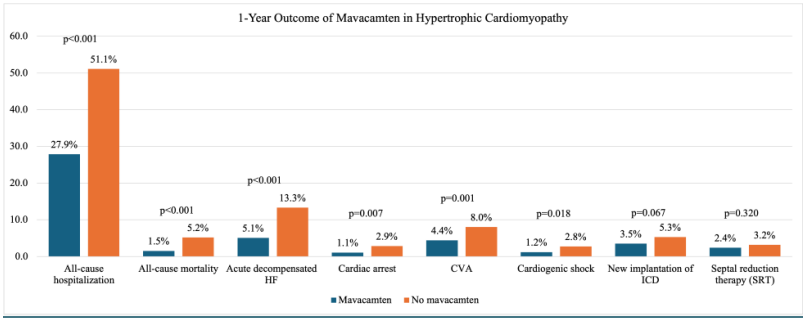


Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	28
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	MACHINE LEARNING MODELLING TO PREDICT HEART FAILURE READMISSION FOLLOWING EMERGENCY DEPARTMENT PRESENTATION: A SYSTEMS INTEGRATION OPPORTUNITY
Author Block:	Vishal Goel, Liam Scanlon, Kristina Lambrakis, Dharani Seneviratne, Allister Lim, Ehsan Khan, Dion Stub, Andrew Lin, Derek P. Chew, Victorian Heart Institute and Victorian Heart Hospital, Melbourne, Australia
Abstract Body:	**Background:** Models predicting heart failure readmissions are often limited by clinical applicability among patient populations with well recognised risk factors. This study aimed to develop machine learning (ML) models to predict HF readmission within 12 months for patients among patients presenting to emergency departments (EDs) across a broad range of suspected cardiac conditions **Methods:** This was a sub-analysis of a cluster randomised clinical trial (n=14,131) across 12 EDs in South Australia from April to December 2023 which enrolled patients with symptoms warranting high-sensitivity cardiac troponin T (hs-cTnT) testing and were then followed for at least 6 months where heart failure admission was one of the subsequent outcomes. The dataset was randomly split 70%/30% for model development and testing. Four ML algorithms were applied and compared to standard logistical regression. Features with >25% missing data were removed. Model performance was evaluated by receiver operating characteristic (ROC) areas under the curve (AUC). **Results:** Among 14,131 prospectively identified ED patients (49% female), 704 patients (4.98%) were readmitted for HF. Median time to HF admission was 69.5 days [IQR: 25 to 149]. An Extreme Gradient Boosting (XGB) model

(AUC 0.876; CI 0.861 - 0.890) outperformed standard logistical regression (AUC 0.859; CI 0.842 - 0.875, $p<0.05$). AUCs were 0.857, 0.869 and 0.857 for random forrest, lasso and neural networks, respectively. Brier scores demonstrated a good calibration of ML models.

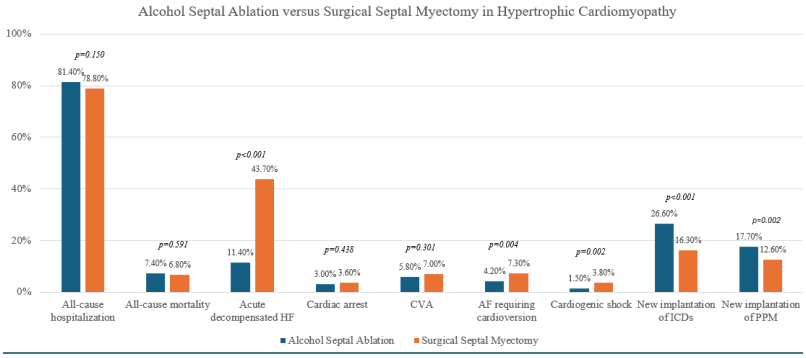
Conclusion: Our ML models effectively predicted HF readmission risk, with XGB outperforming traditional models and other ML algorithms. This approach integrated early in the assessment of high-risk patients may have utility in informing the early use of preventive strategies to improve HF outcomes.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	29
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	IMPACT OF MAVACAMTEN IN HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Min Xuan Tan, Aravinthan Vignarajah, Min Choon Tan, Monash University Malaysia, Selangor, Malaysia, Mayo Clinic Arizona, Phoenix, AZ, USA
Abstract Body:	**Background:** Mavacamten has shown improved outcomes for patients with hypertrophic cardiomyopathy (HCM) in clinical trials.This study aims to assess the 1-year outcomes of patients with HCM taking mavacamten using a multi-national dataset. **Methods:** Using the TriNetX Analytics Research Network, we identified patients aged ≥18 years with HCM between 5/1/2022 and 5/1/2023. Patients were divided into 2 groups: those treated with mavacamten for 1 year and those who were not. Propensity score matching (PSM) was performed using demographics, cardiac medications, and comorbidities. The study outcomes were 1-year all-cause mortality and cardiac adverse events. **Results:** A total of 54,225 patients with HCM were identified, including 1,011 (1.86%) patients treated with mavacamten. After PSM, 908 patients in each group were analyzed. Patients on mavacamten were associated with lower risks of mortality (OR: 0.287, 95% CI: 0.157-0.525), hospitalization (OR: 0.370, 95% CI: 0.304-0.449), acute decompensated HF (OR: 0.347, 95% CI: 0.244-0.494), cardiac arrest (OR: 0.378, 95% CI: 0.181-0.788), CVA (OR: 0.527, 95% CI: 0.354-0.784), and cardiogenic shock (OR: 0.433, 95% CI: 0.212-0.886). There is no difference in the rates of new ICD implantation (OR: 0.654, 95% CI: 0.414-1.034) or septal reduction therapy (OR: 0.753, 95% CI: 0.429-1.320). **Conclusion:** The use of mavacamten in HCM was associated with improved cardiovascular outcomes. These findings emphasize the significance of its application in HCM management.


1-Year Outcome of Mavacamten in Hypertrophic Cardiomyopathy
60.0
50.0
40.0
30.0
20.0
10.0
0.0
p<0.001
51.1%
27.9%
All-cause hospitalization
p<0.001
5.2%
1.5%
All-cause mortality
p<0.001
13.3%
5.1%
Acute decompensated HF
p=0.007
2.9%
1.1%
Cardiac arrest
p=0.001
8.0%
4.4%
CVA
p=0.018
2.8%
1.2%
Cardiogenic shock
p=0.067
5.3%
3.5%
New implantation of ICD
p=0.320
3.2%
2.4%
Septal reduction therapy (SRT)
Mavacamten
No mavacamten

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	30
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	ALCOHOL SEPTAL ABLATION VERSUS SURGICAL SEPTAL MYECTOMY FOR OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Yong Shen Teo, Aravinthan Vignarajah, Min Choon Tan, Mayo Clinic, Phoenix, AZ, USA, University of Malaya, Kuala Lumpur, Malaysia
Abstract Body:	**Background:** Alcohol septal ablation (ASA) and surgical septal myectomy (SSM) are treatment options for patients with hypertrophic cardiomyopathy (HCM) who failed medical therapy. This study aims to assess the 3-year outcomes of these procedures using a multinational database. **Methods:** Using TriNetX Network, this study included patients aged ≥18 years diagnosed with HCM between 1/1/2014 and 1/1/2021. Patients were divided into 2 groups: those treated with ASA and those treated with SSM. Propensity score matching (PSM) was performed. Study outcomes included 3-year all-cause mortality and cardiac adverse events. **Results:** A total of 1,153 patients in the ASA group and 2,666 patients in the SSM group were included. After PSM, 947 patients from each group were analyzed. No significant differences between the groups in all-cause mortality (OR: 1.101, 95% CI: 0.775-1.565), hospitalization (OR: 1.180, 95% CI: 0.942-1.480), cardiac arrest (OR: 0.818, 95% CI: 0.492-1.360), or CVA (OR: 0.823, 95% CI: 0.569-1.191). The ASA group had lower risks of acute HF (OR: 0.166, 95% CI: 0.131-0.210), cardiogenic shock (OR: 0.380, 95% CI: 0.203-0.709), and AF requiring cardioversion (OR: 0.561, 95% CI: 0.376-0.838). However, ASA group had higher rates of new ICD (OR: 1.867, 95% CI: 1.491-2.338), and PPM implantation (OR: 1.494, 95% CI: 1.163-1.919). **Conclusion:** Alcohol septal ablation reduced the risks of acute decompensated HF, AF requiring cardioversion, and cardiogenic shock

compared to surgical septal myectomy for HCM.



Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	31
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	A SYSTEMATIC REVIEW AND META-ANALYSIS ON THE PERFORMANCE OF CONVOLUTIONAL NEURAL NETWORKS ECGS IN THE DIAGNOSIS OF HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Mir wajid Majeed, Ivo Queiroz, Lucas Mendes Barbosa, Beatriz Accioly, Cleyton Lima, Sabrina Lucas, Lucca Lopes, Emanuel Leão, Matheus Jardine, Antonio Mutarelli, Issa Salha, Mir Danish Majeed, Pedro Henrique Reginato, ZAINAB HUMAYUN, Andrea Lordsleem, Melissa Chacón, Mariano Gallo Ruelas, Júlia Dos Santos Monteiro, Gabriel Bezerra, Government Medical college, Srinagar, India
Abstract Body:	**Background:** Hypertrophic cardiomyopathy (HCM) is a leading cause of sudden cardiac death in younger individuals. Accurate diagnosis is crucial for management and improving patient outcomes. The application of convolutional Neural Networks (CNN), a type of AI modeling, to electrocardiogram (ECG) analysis, presents a promising and optimistic avenue for the detection of HCM. We conducted a meta-analysis to assess the effectiveness of CNN models in diagnosing HCM through ECG. **Methods:** Databases including MEDLINE, Embase, and Cochrane were searched up to August 12, 2024, focusing on CNN ECG-based HCM detection models. The outcomes were sensitivity, specificity, and SROC. Pooled proportions were calculated using a random-effects model with 95% confidence intervals (CIs), and heterogeneity was assessed using the I^2 statistics. This study was registered on PROSPERO protocol CRD42024581925 **Results:** Our analysis included 16 studies with ECG data from 513,972 patients. The AI algorithms employed CNNs for ECG interpretation. Sixteen studies contributed to the qualitative analysis, while seven studies for the pooled SROC with an 11% false positive rate, with a sensitivity of 89% (95% CI 86% to 92%, Figure 1A) and a specificity of 88% (95% CI 81%

to 93%, Figure 1B).

Conclusion: AI-driven ECG interpretation shows high accuracy and sensitivity in detecting HCM, though the modest PPV suggests that AI should be integrated with clinical evaluation to enhance reliability, particularly in screening settings.

Fig 1 A: Pooled Sensitivity of the Included studies

Study	TP	TP+FN	Sensitivity	95% CI
Goto 2022	1019	1108	0.92	[0.90; 0.93]
Haimovich 2023	972	1056	0.92	[0.90; 0.94]
Hirota 2024	115	140	0.82	[0.75; 0.88]
Kalmady 2024	4072	4485	0.91	[0.90; 0.92]
Ko 2020	532	612	0.87	[0.84; 0.89]
Siontis 2021	276	300	0.92	[0.88; 0.95]
Siontis 2024	640	773	0.83	[0.80; 0.85]
Total (95% CI)		**8474**	**0.89**	**[0.86; 0.92]**

Heterogeneity: $Tau^2 = 0.0015$; $Chi^2 = 53.80$, df = 6 ($P < 0.01$); $I^2 = 89\%$

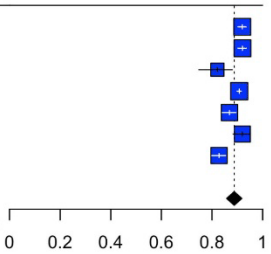
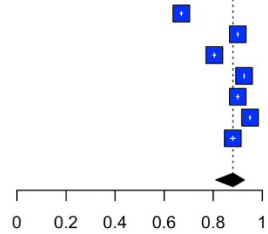
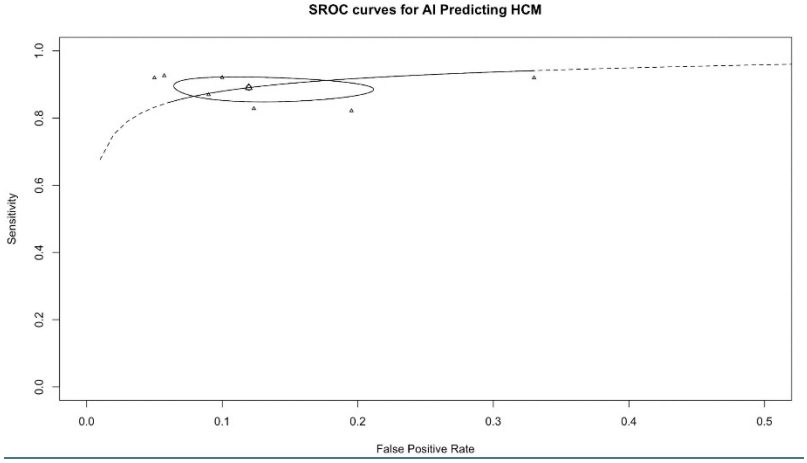


Fig 1 B: Pooled Specificity of the Included studies

Study	TN	TN+FP	Specificity	95% CI
Goto 2022	36864	55021	0.67	[0.67; 0.67]
Haimovich 2023	44688	49653	0.90	[0.90; 0.90]
Hirota 2024	15312	19030	0.80	[0.80; 0.81]
Kalmady 2024	221809	239592	0.93	[0.92; 0.93]
Ko 2020	11509	12788	0.90	[0.89; 0.91]
Siontis 2021	17517	18439	0.95	[0.95; 0.95]
Siontis 2024	3402	3867	0.88	[0.87; 0.89]
Total (95% CI)		**398390**	**0.88**	**[0.81; 0.93]**

Heterogeneity: $Tau^2 = 0.5423$; $Chi^2 = 25595.92$, df = 6 ($P = 0$); $I^2 = 100\%$





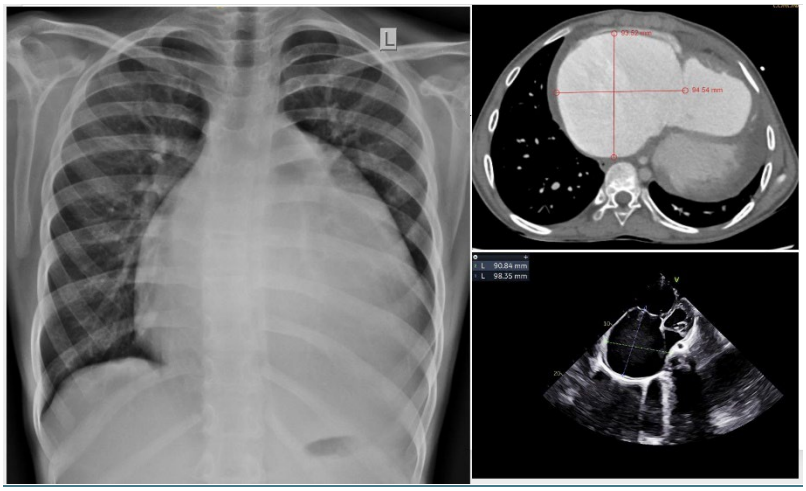
Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	32
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	THE INTERPLAY BETWEEN MITRAL REGURGITATION SEVERITY AND LEFT ATRIAL STRAIN ON OUTCOMES IN ASIAN PATIENTS WITH HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Tony Li, Raymond Ching-Chiew Wong, Novi Yanti Sari, Bui Khiong Chung, Andre Seah, Yoke-Ching Lim, Perryn Ng, James Wei Luen Yip, Kian Keong Poh, William K. F. Kong, Weiqin Lin, Ching Hui Sia, Tiong Cheng Yeo, Department of Cardiology, National University Heart Centre, Singapore, Singapore, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore
Abstract Body:	**Background:** Mitral regurgitation (MR) is common in patients with hypertrophic cardiomyopathy (HCM) and can be due to HCM or non-HCM related causes. MR can lead to left atrial (LA) remodeling, dilatation and heart failure. Left atrial strain has been shown to be an independent predictor of heart failure and adverse outcomes in HCM. This study aims to examine the potential influence of MR and its interaction with LA strain on the prognosis, clinical presentation, and structural characteristics of HCM patients. **Methods:** This was a retrospective study involving 491 patients diagnosed with HCM between 2010 and 2022. The severity of MR was assessed based on the index echocardiogram while LA strain was retrospectively assessed using TOMTEC software. We tested the presence of moderate or greater MR and LA strain against outcomes of (a) heart failure hospitalization and (b) composite of adverse outcomes including mortality, VT/VF events, appropriate device therapy if an ICD was implanted, stroke and heart failure hospitalization. **Results:** This cohort had an average age of 59.9 years-old with a slight female preponderance (55.2%). There were 68 patients with moderate or greater MR.

They were older, had a higher LV mass index and more commonly had an obstructive phenotype. In terms of etiology, MR was mostly HCM related (67.6%) while non-HCM related MR tended to be due to degenerative causes (14.7%) or prolapse (13.2%). On echocardiography, patients with MR tended to have a larger LA, higher filling pressures and an abnormal LA strain. They were more symptomatic with a greater proportion on oral diuretics. On univariate analysis, both MR and abnormal LA strain were independently associated with heart failure hospitalization and composite adverse outcome. After stratifying by the degree of MR, while an abnormal LA strain continued to be associated with both outcomes in patients with mild or less MR, it was no longer associated with composite adverse outcomes in patients with moderate or greater MR.

Conclusion: An abnormal LA strain was associated with heart failure hospitalization in patients with mild MR but was no longer associated with composite adverse outcomes in patients with moderate or greater MR.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	33
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	RIGHT ATRIAL ANEURYSM SECONDARY TO EBSTENOID ANOMALY OF THE TRICUSPID VALVE AND ATRIAL SEPTAL DEFECT
Author Block:	Uma Devi Karuru, Naveen T, Mysore Sai Kumar, Ashirbad Parhi, Sadanand Reddy Tummala, Kiran Kumar Kanjerla, ESIC Medical College and Superspeciality Hospital, Hyderabad, India
Abstract Body:	**Background:** The Ebstenoid anomaly involves tricuspid valve malformation without displacement, causing abnormal hemodynamics and chamber dilation. Its association with right atrial aneurysm (RAA) and atrial septal defect (ASD) is rare. RAA increases the risk of arrhythmias and other complications, challenging clinical management. We report a 15-year-old female with aneurysmal RA secondary to Ebstenoid anomaly and ASD, emphasizing clinical features, diagnosis, and surgical outcomes. **Case:** A 15-year-old female presented with a 5-year history of progressive exertional dyspnea (NYHA class I to II) and occasional palpitations. Imaging revealed a massively enlarged right atrium, severe low-pressure tricuspid regurgitation, an atrial septal defect, and an Ebstein-like tricuspid valve malformation with an elongated anterior leaflet and tethered septal leaflet. Cardiac CT and 4D ECHO confirmed the same. Cardiac catheterization showed pulmonary artery pressures at one-third of systemic levels. **Decision-making:** The patient underwent surgical repair of the tricuspid valve, ASD closure & right atrial reduction surgery. At 1 year follow up, the patient showed significant improvement to NYHA class I & was doing well. **Conclusion:** This case highlights the need for early recognition and evaluation of complex congenital heart anomalies. The rare RAA-ASD combination poses challenges, but timely surgery with multimodal

imaging and tailored planning can improve symptoms and prognosis. 4o.



Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	34
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	INTENSIVE VS STANDARD BLOOD PRESSURE REDUCTION AND ITS ASSOCIATION WITH COGNITIVE DECLINE AND DEMENTIA - A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED-CONTROLLED TRIALS
Author Block:	Corrine Lee Singh, Yao Neng Teo, Yao Hao Teo, Jin Hean Koh, Benjamin Tan, leonard yeo, Yao Feng Chong, Vanda WT Ho, Li Feng Tan, Mark Chan, Ching Hui Sia, National University Heart Centre, Singapore, Singapore, Singapore
Abstract Body:	**Background:** To investigate the association between intensive blood pressure (BP) reduction and standard BP management in relation to the incidence of cognitive decline and dementia among patients with hypertension. **Methods:** A systematic review and meta-analysis was conducted following PRISMA guidelines. Randomised controlled trials (RCTs) comparing intensive (≤110-130 mm Hg) versus standard BP control (≤130-150 mm Hg) in adults aged 40 years and older were included. Data from 8 studies totalling 58,018 participants were extracted and analysed. The primary outcome was cognitive decline, and secondary outcomes were dementia, mild cognitive impairment (MCI), cerebrovascular events, and serious adverse events. **Results:** There were no significant differences in the risk of cognitive decline (SMD, -0.03; 95% CI, -0.16 to 0.09) and dementia (RR, 0.86; 95% CI: 0.73 to 1.02) in the intensive group compared to the standard group. However, intensive BP management significantly reduced the risk of cerebrovascular events (RR, 0.77; 95% CI: 0.63 to 0.93). No significant differences were observed for MCI or serious adverse events. **Conclusion:** Intensive BP reduction does not significantly affect the risk of cognitive decline or dementia but it may reduce the incidence of

cerebrovascular events. Although current evidence does not support lowering BP targets specifically for cognitive benefits, there are potential cardiovascular advantages.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	35
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	ACCELERATED BIOLOGICAL AGING INDICATES HIGHER RISK OF DEGENERATIVE VALVULAR HEART DISEASE
Author Block:	Ziang Li, fuwai hospital, Beijing, China

Abstract Body:

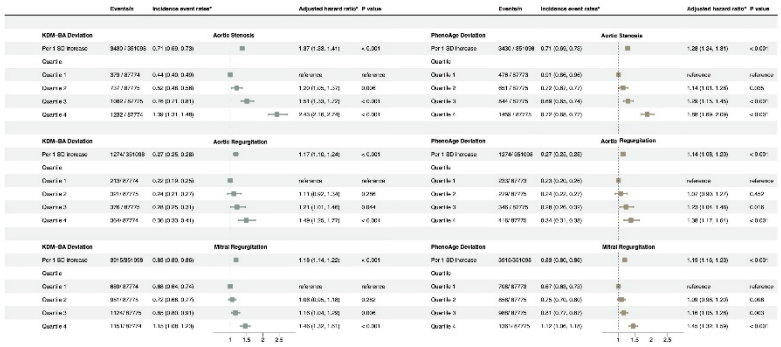
Background: Timely identification of individuals at high risk for degenerative valvular heart disease (VHD) is essential, but current reliance on echocardiography is limited. Biological aging, using system biomarkers from multiple physiological systems, may offer a more precise assessment of degenerative VHD risk. We aims to evaluate whether biological age can aid in identifying high-risk individuals for Degenerative VHD.

Methods: Data from the UK Biobank, including over 300,000 participants, were analyzed. Biological age was estimated using the Klemera-Doubal method (KDM-BA) and PhenoAge algorithms. Cox proportional hazard models, adjusted for sociodemographic, and clinical factors, were employed to estimate VHD risk.

Results: Among 351,098 individuals (median age 58; 46% male), there were 3,430 cases of aortic stenosis (AS), 1,274 of aortic regurgitation (AR), and 3,915 of mitral regurgitation (MR) over a median follow-up of 13.8 years. Both KDM-BA and PhenoAge deviations were significantly associated with increased VHD risk ($p < 0.001$), with the highest effect observed for AS. Age deviation had the strongest effect on AS risk (HR for KDM-BA: 1.37, 95% CI [1.33,1.41]; HR for PhenoAge: 1.28, 95% CI [1.24,1.31]).

Conclusion: Biological aging could enhance clinical decision-making by helping prioritize high-risk individuals for early VHD screening and

preventive strategies.



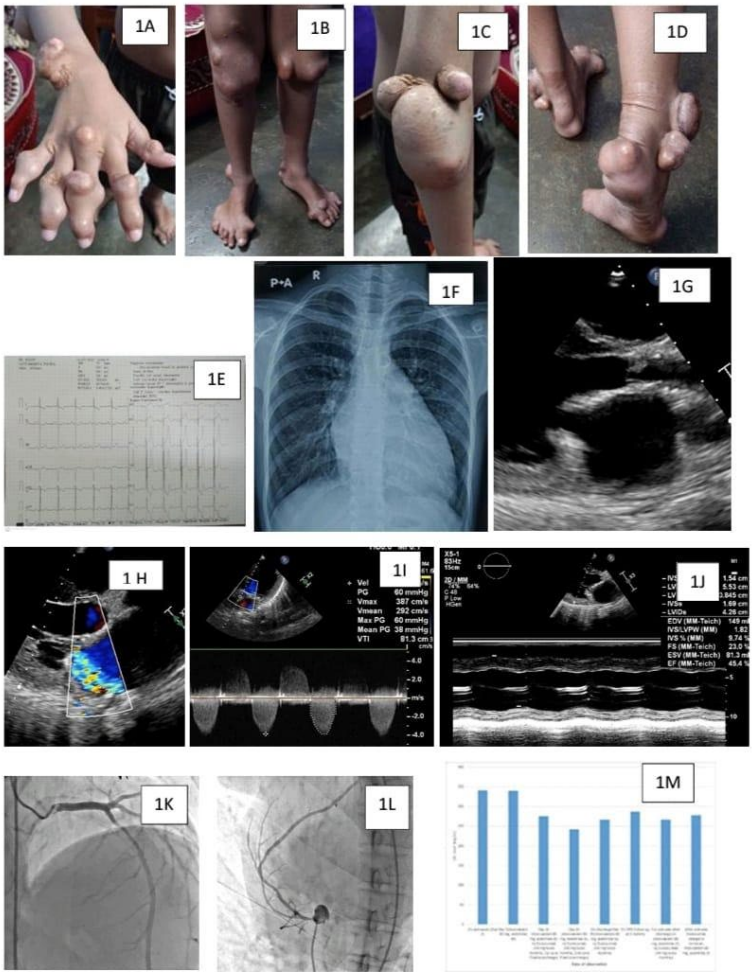
Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	36
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE INCIDENCE OF IN-HOSPITAL BLEEDING AND VALIDATION OF THE VTE-BLEED RISK SCORE AMONG PATIENTS WITH ACUTE PULMONARY EMBOLISM IN A TERTIARY HOSPITAL IN THE PHILIPPINES
Author Block:	Jerahmeel Aleson Mapili, Nigel Jeronimo Santos, Christopher Lloyd Lim, Austin Japheth Salvan, TIFFANY PEARL GUEVARRA, Rio May Llanes, Anna Mayleen Fermin, Frances Dominique Ho, Richard Henry Perlas Tiongco, II, Elaine Alajar, Muriel Morilla, Maria Teresa Bacnis Abola, Felix Eduardo Rubia Punzalan, Philippine General Hospital, Manila City, Philippines
Abstract Body:	**Background:** Pulmonary embolism (PE) is the third leading cardiovascular cause of mortality and is the leading preventable cause of death among hospitalized patients. Therapeutic anticoagulation, the cornerstone of management of PE, bears significant bleeding risks. This study aimed to determine the incidence and predictors of and the validity of the VTE-BLEED risk score for in-hospital major bleeding among patients with pulmonary embolism. **Methods:** A retrospective cohort study was done and included all adult patients with contrast-enhanced CT scan confirmed PE admitted in a tertiary hospital in the Philippines from May 2022 to May 2023. Electronic medical records were reviewed. STATA 17.0 was utilized to determine risk ratio (RR) for each exposure and the area under the receiver operating characteristic (AUROC) for validation of utility of the VTE-BLEED score. **Results:** A total of 102 patients were included. Most were females (62.75%), the mean age was 52.2 years, 39.22% had concomitant deep vein thrombosis (DVT), and majority had malignancy (72.5%). The incidence of major bleeding is 23.53% occurring at a mean time of 6 days after initiation of anticoagulation. The most common site of

bleeding was upper gastrointestinal (41.7%). The VTE-BLEED risk score had an AUROC of 0.46 for predicting major bleeding. The significant factors associated with increased risk for in-hospital major bleeding were an age ≥ 60 years old [RR 2, 95% CI 1.01 to 3.97] and an IMPROVE bleeding risk score ≥ 7 [RR 5.89, 95% CI 2.39 to 14.51]. On the other hand, malignancy was associated with a lower risk of in-hospital major bleeding but did not reach statistical significance [RR 1.59, 95% CI 0.31 to 1.27].

Conclusion: Among patients with acute PE in our institution, the incidence of major bleeding was high. The VTE-BLEED score had poor overall prediction of major bleeding. Furthermore, an age ≥ 60 years old and IMPROVE bleeding risk score ≥ 7 was significantly associated with increased risk of major bleeding. We recommend studies with larger sample size to improve accuracy. Designing a risk assessment model specifically to be used for patients with cancer-associated thrombosis is recommended.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	37
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CONQUERING THE CHALLENGES OF SEVERE HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA
Author Block:	Saroj Kumar Sahoo, Prabhat Kumar Singh, Ramachandra Barik, Debasis Acharya, Pranjit Deb, Sindhu Rao Malla, Debasis Panda, Saikarthik Kowtarapu, Saran P Mohanan, ALL INDIA INSTITUTE OF MEDICAL SCIENCE, Bhubaneswar, India
Abstract Body:	**Background:** A 15-year-old male from a consanguineous marriage with multiple skin lesions, complaints of dyspnoea, and exertional angina, NYHA class III for 15 days. **Case:** Figures 1A to 1J illustrate the patient's clinical profile. With an LDL-C level of 341 mg/dL, he received a familial hypercholesterolemia score of 16 based on Dutch Lipid Clinic criteria. A skin biopsy confirmed xanthogranuloma, but we were optimistic about the management plan. He was started on atorvastatin 80 mg, ezetimibe 10 mg, and two cycles of LDL apheresis, which lowered his LDL-C to 242 mg/dL and reduced the size of the xanthomas. Genetic analysis revealed a homozygous variant in the LDL receptor, [c.1060+2T>G], but his coronary arteries remained normal (Figures 1K-L). Post-discharge, the patient continued with atorvastatin, ezetimibe, and evolocumab 140 mg biweekly, choosing medical management over valve replacement surgery. Follow-up LDL levels were stable (274 to 286 mg/dL), and transitioning to inclisiran resulted in an LDL-C level of 243 mg/dL, as shown in Figure 1M. **Decision-making:** Familial hypercholesterolemia (FH) is an autosomal dominant genetic disorder caused by mutations in LDL receptors. Undiagnosed FH patients face a high risk of early atherosclerotic cardiovascular disease, making intensive treatment essential. **Conclusion:** Patients with homozygous hypercholesterolemia typically need high-dose statins along with additional therapies like ezetimibe,

PCSK9 inhibitors, and LDL-C apheresis.



Figures 1A to 1D show multiple diagnostic xanthomas over the extensor aspect of the upper and lower limbs;1E, ECG showed sinus rhythm with LVH with strain; 1F showed cardiomegaly in chest x-ray; 1G to 1J, 2D Echocardiography showed thickened mitral valve and aortic valve, severe eccentric MR, severe aortic stenosis with LVEF – 45%; figure 1K to 1L, Coronary angiography showed normal coronary artery; 1M showed an LDL trend over course.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	38
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	NEWLY DIAGNOSED SEVERE HYPOTHYROIDISM PRESENTING AS CARDIAC TAMPONADE: A DIAGNOSTIC CHALLENGE
Author Block:	Amanpreet Singh Wasir, Anuj Darak, Aditi Agarwal, Prashant BHARADWAJ, Ravi Kalra, Bharati Vidyapeeth University Medical College, Pune, India
Abstract Body:	**Background:** While the association of pericardial effusion with overt hypothyroidism is well-recognized, cardiac tamponade as the initial presentation of newly diagnosed severe hypothyroidism is rare. It often presents with non-specific symptoms, requiring a high index of suspicion for timely diagnosis and management. **Case:** A 62-year-old male with a history of type 2 diabetes mellitus and hypertension presented with chest pain and worsening dyspnea for two weeks. Examination revealed bilateral pedal edema, pulsus paradoxus, elevated jugular venous pressure, and muffled heart sounds. Electrocardiogram showed sinus rhythm with low voltage complexes. Transthoracic echocardiography revealed moderate pericardial effusion, left ventricular ejection function= 60%, early diastolic right ventricular and right atrial systolic collapse, and pulse wave doppler showing >25% variation in mitral inflow velocities and >40% variation in tricuspid inflow velocities during inspiration and expiration. Chest X-ray showed cardiomegaly. Thyroid function tests revealed significantly elevated TSH levels >100 µIU/mL (normal range= 0.4-4 µIU/mL) and low T3 (0.2 ng/mL) and T4 (0.9 ng/mL) levels. All other biochemical tests were within normal limits. **Decision-making:** Urgent pericardiocentesis revealed 450 mL of straw-coloured fluid, which was negative for tuberculosis or malignancy. The patient was initiated on levothyroxine supplementation, resulting in a dramatic resolution of symptoms. Follow-up echocardiography after 2 weeks

showed no residual pericardial effusion or any regional wall motion abnormalities. The patient was discharged in stable condition and is currently receiving maintenance therapy with levothyroxine. In hypothyroidism, pericardial fluid accumulates slowly, allowing the pericardial membrane to adapt, making cardiac tamponade in newly diagnosed cases exceedingly rare.

Conclusion: This case highlights the critical association between cardiac tamponade and hypothyroidism, emphasizing the need for high clinical suspicion and prompt initiation of levothyroxine therapy to avoid potentially life-threatening complications.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	39
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	FACILITATORS AND BARRIERS TO COORDINATION OF EMERGENCY MEDICAL SERVICES AT PRIMARY HEALTHCARE CENTERS IN RESOURCE-LIMITED RURAL SETTINGS
Author Block:	Mailikezhati Maimaitiming, Kepei Huang, Yanxin Bi, Ziqi Zhu, Siwen Li, Yikai Feng, Minmin Wang, Shuduo Zhou, Yinzi Jin, Zhi-Jie Zheng, School of Public Health, Peking University, Beijing, China
Abstract Body:	**Background:** Annually many deaths and disabilities from acute events are attributed to poor coordination of EMS, especially in resource-limited rural settings, which has however been largely understudied. This study aimed to characterize the EMS coordination in rural communities, particularly within the context of acute coronary syndromes (ACS) treatment, and identify the influential factors of EMS coordination. **Methods:** A cross-sectional study was conducted from June 2023, to February 2024. Three counties from west/middle/east provinces of China. The anonymous surveys employed Spearman correlation (r) to calculate the strength of correlations between EMS coordination and influential factors. **Results:** A total of 39 township healthcare centers (THCs) and 428 primary healthcare workers (PHWs) were included. Real-time feedback information system was used in 71.38% of THCs for interregional collaboration, while telephone (81.22%) was the main approach for sharing patient information between staff. Information inaccuracy, information delay and information deficiency were the most common causes of fragmented care in EMS. For individual-level contributors to coordination of EMS, increased training times for PHWs contributed significantly to the reductions of information deficiency, information inaccuracy, duplicate record , information delay, prolonged handover, and duplicate test. For system-level contributors to coordination of EMS,

real-time feedback system, electronic triage assistance system, early warning system, point-of-care-test, standardized communication tool/guideline/training and multidisciplinary treatment team were inversely associated with prolonged handover. Real-time feedback system and electronic triage assistance system were inversely correlated with information delay and duplicate test.

Conclusion: Coordination of EMS is not promising in rural primary care settings, which may be the results of both system and personal factors. Providing professional training, introducing efficient information-sharing instruments, and creating favorable working conditions are advisable to reduce fragmented care in EMS.

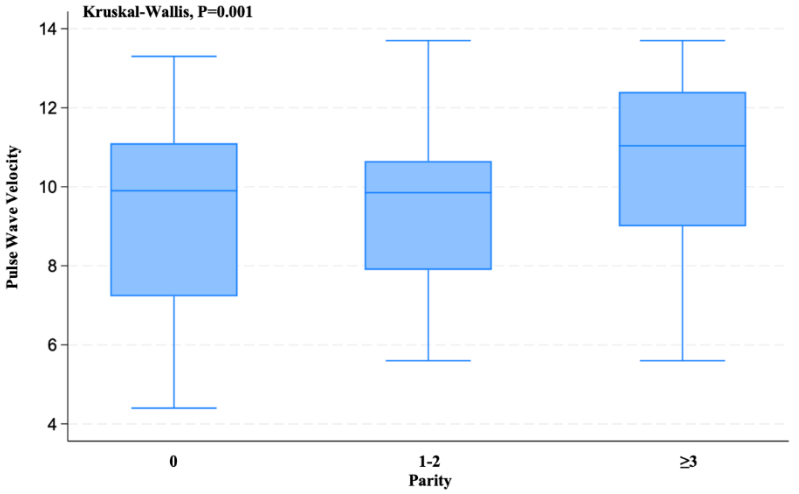
Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	40
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	COMPARATIVE EFFICACY OF GENOMIC BIOMARKERS APOB VERSUS LDL-C IN CARDIOVASCULAR DISEASE PREVENTION: META-ANALYSIS AND SYSTEMATIC REVIEW OF AGGREGATE AND INDIVIDUAL PATIENT DATA
Author Block:	Matheus Santos Samaritano Pereira, Universidade Municipal de São Caetano do Sul, Itapetininga, Brazil
Abstract Body:	**Background:** Cardiovascular disease (CVD) remains the leading global cause of morbidity and mortality, requiring accurate biomarkers for prevention. Apolipoprotein B (ApoB) and low-density lipoprotein cholesterol (LDL-C) are widely used, but their comparative effectiveness in predicting CVD risk is still debated. **Methods:** A systematic review and meta-analysis of studies published between 2000 and 2024 was conducted, including aggregate and individual patient data. Eligible studies evaluated ApoB and LDL-C as predictors of cardiovascular outcomes, such as myocardial infarction, stroke, and CVD-related mortality. Random-effects models were used to estimate pooled relative risks (RR) and 95% confidence intervals (CI). Heterogeneity was assessed using the I^2 statistic, with values >50% indicating substantial heterogeneity. Subgroup analyses examined variations across populations, including primary and secondary prevention settings and diabetic cohorts. Predictive accuracy was evaluated using the area under the curve (AUC) and net reclassification improvement (NRI). **Results:** From 45 studies encompassing 2.1 million participants, ApoB demonstrated superior predictive performance compared to LDL-C. ApoB showed a pooled RR of 1.48 (95% CI: 1.34-1.64), outperforming LDL-C with a pooled RR of 1.32 (95% CI: 1.21-1.45). In predictive accuracy, ApoB achieved an AUC of 0.78 versus 0.71 for LDL-C (p <

0.001), reflecting an 18% improvement. Net reclassification analyses showed ApoB improved risk categorization by 22% in diabetic cohorts and reduced misclassification by 15% in primary prevention settings. Sensitivity and specificity for ApoB were consistently higher, particularly for nonfatal events such as myocardial infarction, where predictive capacity improved by 20% over LDL-C.

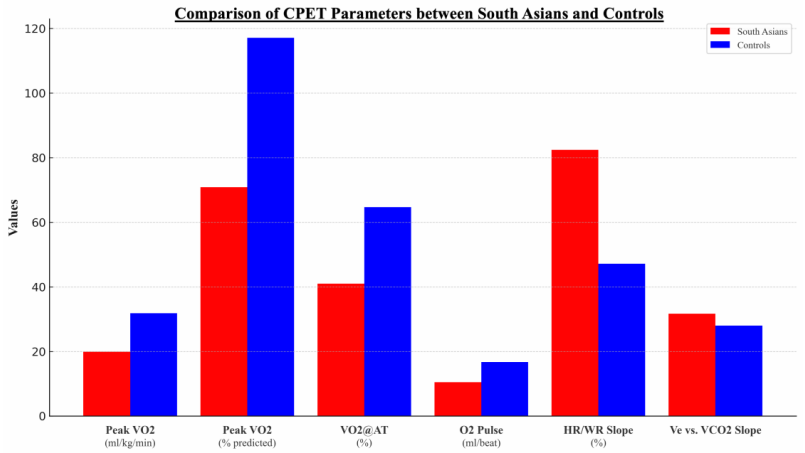
Conclusion: ApoB is a more effective genomic biomarker than LDL-C for predicting cardiovascular risk, demonstrating superior accuracy and clinical utility. These findings support the adoption of ApoB in CVD prevention guidelines to enhance patient outcomes.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	42
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EFFECTS OF PARITY ON ARTERIAL STIFFNESS IN OLDER ASIAN WOMEN
Author Block:	Keerthana Thangaraja, Gayathri Basker, Jie Jun Wong, Gao Fei, Ru San Tan, Gina S. Lee, Louis L Y Teo, Louis L Y Teo, Ling Jun Li, Angela S. Koh, National Heart Centre of Singapore, Singapore, Singapore
Abstract Body:	**Background:** Effects of parity on vascular ageing independent of chronological ageing are rarely studied. The use of arterial stiffness is an objective method to differentiate cardiovascular risk between the sexes. We aimed to study the association of parity with arterial stiffness in older Asian women. **Methods:** Among a community based cohort of older Asian women without cardiovascular disease, patient and clinical characteristics including co-morbidities, cardiac parameters, and parity were collected. Arterial stiffness was measured through pulse wave velocity (PWV), m/s, using a cuff-based auscultatoric oscillometric pulse wave analysis machine. Associations between parity and cardiac parameters including PWV were analysed through multiple linear regression model adjusting for body mass index (BMI) and presence of co-morbidities. **Results:** 176 women (mean age 64.79±13.26 years) were included. Parity ranged from 0 to 8, including 33 (18.75%) women without children, 84 (47.73%) with 1-2 children and 59 (33.52%) with ≥3 children. After adjusting for BMI and presence of hypertension, diabetes mellitus and dyslipidemia, women with higher parity of ≥3 compared to 1-2 were found to have increased PWV (β=0.73; 95% CI [0.05, 1.41]). This significant observation remained after additionally adjusting for age (β=0.31; 95% CI [0.06, 0.56]). **Conclusion:** Multiparity (≥3), independent of chronological ageing, was associated with an increment in arterial stiffness, a proxy for cardiac

aging in older women.



Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	43
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EXERCISE DEFICIENCY IN SOUTH ASIANS WITH CARDIOVASCULAR RISK FACTORS
Author Block:	Shayanthan Sornalingam, Nikhil Kumar, Nuzla Ameen, Akshay Bagai, Naresh Kumar, Whitby Cardiovascular Institute, Whitby, Canada
Abstract Body:	**Background:** South Asians are reported to have significantly reduced cardiorespiratory fitness (CRF) with a 10-12-year shorter life span compared to Caucasians. This study investigated directly measured CRF in the two groups. **Methods:** An observational study of symptomatic patients referred to an outpatient cardiology practice for exercise intolerance evaluation (chest pain, dyspnea, fatigue). Maximal effort cardiopulmonary exercise test (CPET) studies performed in 250 South Asian patients were compared to a similar matched cohort of controls. Demographic, BMI and risk factor data were collected. All p-values were two-sided with < 0.05 as the threshold for statistical significance. **Results:** Compared to the Caucasian cohort, South Asians exhibit significantly reduced exercise capacity from impaired cardiovascular function, as indicated by a reduced Peak VO_2 (pVO_2) (-37.40%), anaerobic threshold (AT) (-36.70%) and Peak O_2-pulse (-37.37%); In contrast, the Ve vs. VCO_2 slope was 13.19% higher and the ΔHR-WR slope was 74.78% higher in South Asians, indicating greater ventilatory inefficiency and increased cardiac strain during exercise. All differences were statistically significant ($p < 0.001$).



	South Asians (Mean ± SD)	Controls (Mean ± SD)	Percentage Difference
Peak VO2 (ml/kg/min)	19.9 ± 4.6	31.79 ± 6.73	-37.40%
Peak VO2 (% predicted)	70.87% ± 8.6%	117.06% ± 16.55%	-39.46%
VO2@AT (%)	40.95% ± 7.05%	64.69% ± 13.2%	-36.70%
Ve vs. VCO2 Slope	31.67 ± 3.86	27.98 ± 3.13	13.19%
O_2 Pulse (ml/beat)	10.46 ± 2.79	16.7 ± 3.82	-37.37%
ΔHR/WR Slope (%)	82.41% ± 115.28%	47.15% ± 88.11%	74.78%

p-value < 0.001 for all parameters
Total Study Size: 500 Patients (250 in each cohort)

Demographics and Measurements

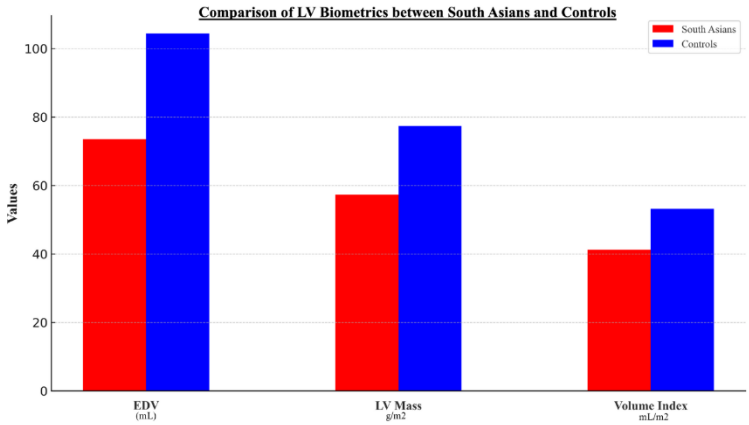
Age and Gender	Height (in.)	Weight (lbs)	BMI	BSA
< 40: 62 patients	**South Asians:**	**South Asians:**	**South Asians:**	**South Asians:**
> 40: 188 patients	62.80 ± 2.53 for females	151.75 ± 24.36 for females	27.09 ± 4.27 for females	1.74 ± 0.15 for females
	68.54 ± 2.52 for males	182.28 ± 32.04 for males	27.27 ± 4.3 for males	1.99 ± 0.19 for males
	Controls:	**Controls:**	**Controls:**	**Controls:**
Male: 174	65.12 ± 2.51 for females	160.21 ± 31.81 for females	26.47 ± 5.09 for females	1.82 ± 0.19 for females
Female: 76	69.88 ± 2.87 for males	198.74 ±- 33.50 for males	28.76 ±- 4.87 for males	2.10 ± 0.19 for males

Risk Factor Comparison

Risk Factors	South Asians	Controls
Smoking Status	27	15
Hypertension	84	59
DM	45	15
Hypercholesterolemia	108	69
CAD	13	11

Conclusion: South Asians with exercise intolerance have ~40% lower CRF compared to a similar Caucasian cohort. Physiologically, the results show impaired peak cardiac function from impaired peak stroke volume and increased pulmonary congestion which highlights the need for targeted interventions.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	44
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	IMPACT OF EXERCISE DEFICIENCY ON LEFT VENTRICULAR BIOMETRICS IN SOUTH ASIANS
Author Block:	Shayanthan Sornalingam, Nikhil Kumar, Naresh Kumar, Whitby Cardiovascular Institute, Whitby, Canada
Abstract Body:	**Background:** South Asians, a population known for higher cardiovascular risk have reduced left ventricular biometrics. The study investigates the differences in LV parameters such as end-diastolic-volume (EDV), left ventricular (LV) mass and volume index, to determine how reduced physical activity influences cardiac structure and function. **Methods:** This study evaluates symptomatic patients for exercise intolerance using cardiopulmonary exercise testing (CPET), with simultaneous or follow-up echocardiograms. A cohort of 140 South Asian patients were compared to an similarly matched Caucasian group. All p-values were two-sided, with a significance threshold of < 0.05. **Results:** Compared to the controls, South Asians exhibit a significantly lower EDV by 29.55%, LV mass by 25.93% and volume index by 22.43%. All differences were statistically significant ($p < 0.001$). These parameters indicate reduced preload and smaller dimensions due to lack of remodeling that occur with regular aerobic exercise.



	South Asians (Mean ± SD)	Controls (Mean ± SD)	Percentage Difference
EDV (ml)	73.51 ± 15.78	104.35 ± 23.75	-29.55%
LV Mass (g/m²)	57.27 ± 11.63	77.32 ± 14.57	-25.93%
Volume Index (ml/m²)	41.22 ± 32.64	53.14 ± 10.9	-22.43%
p-value < 0.001 for all parameters Total Study Size: 280 Patients (140 in each cohort)			

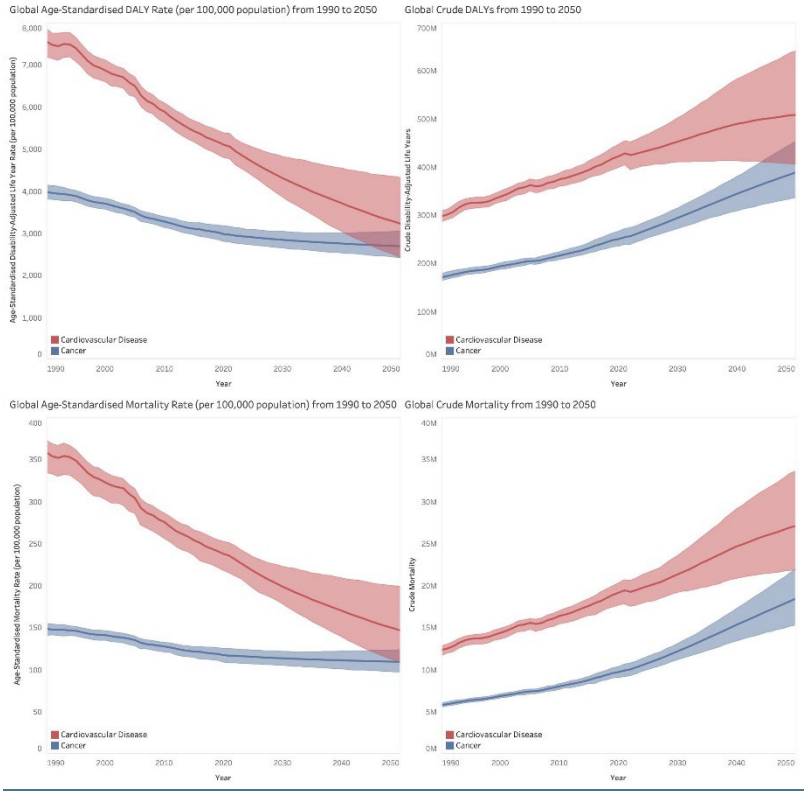
Demographics and Measurements

Age and Gender	Height (in.)	Weight (lbs)	BMI	BSA
< 40: 62 patients	**South Asians:**	**South Asians:**	**South Asians:**	**South Asians:**
> 40: 188 patients	62.80 ± 2.53 for females	151.75 ± 24.36 for females	27.09 ± 4.27 for females	1.74 ± 0.15 for females
	68.54 ± 2.52 for males	182.28 ± 32.04 for males	27.27 ± 4.3 for males	1.99 ± 0.19 for males
	Controls:	**Controls:**	**Controls:**	**Controls:**
Male: 174	65.12 ± 2.51 for females	160.21 ± 31.81 for females	26.47 ± 5.09 for females	1.82 ± 0.19 for females
Female: 76	69.88 ± 2.87 for males	198.74 ±- 33.50 for males	28.76 ±- 4.87 for males	2.10 ± 0.19 for males

Conclusion: South Asians with reduced exercise capacity due to lack of regular aerobic exercise have significantly reduced left ventricular biometrics compared to its Caucasian cohort. A reduction in these parameters result in a lower cardiac output and reduced cardiac efficiency, contributing to poorer exercise tolerance and overall performance of the heart.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	45
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	GLOBAL ESTIMATES, TRENDS AND PREDICTIONS OF CARDIOVASCULAR DISEASES, CANCER AND THEIR SHARED RISK FACTORS: DATA FROM THE GLOBAL BURDEN OF DISEASE 2021
Author Block:	Chieh Yang Koo, Bryan Chong, Jayanth Jayabaskaran, Srinithy Nagarajan, Li-Ling Tan, Nicholas Chew, Yong Loo Lin School of Medicine, National University Singapore, Singapore, Singapore, National University Heart Centre, National University Health System, Singapore, Singapore
Abstract Body:	**Background:** Understanding the shared risk factors of cardiovascular diseases (CVDs) and cancer is crucial for developing effective interventions against them. **Methods:** Mortality and disability-adjusted life years (DALYs) associated with CVDs, cancers, and their risk factors were obtained from the Global Burden of Disease 2021 study. Historical estimates from 1990-2021 and forecast data from 2025-2050 were examined across age-groups, regions, sociodemographic index (SDI), health systems, and sex. **Results:** In 2021, CVD and cancer caused 29.3 million (95% Uncertainty Interval: 27.7-30.7) deaths and 681.6 million (650.9-712.3) DALYs globally. This represents 19.4 million deaths (17.8-20.7) from CVD and 9.89 million deaths (9.12-10.59) from cancer. Central Europe, Eastern Europe and Central Asia had the highest age-standardised DALY rates in 2021 for both CVDs and cancer. While low-middle SDI regions had the highest CVD-related age-standardised DALY rates, high-middle SDI regions had the highest cancer-related rates in 2021. From 1990-2021, the crude burden on CVDs and cancer rose despite reductions in age-standardised rates, a trend that continues from 2025-2050. In 2021, high systolic blood pressure, dietary risks, and tobacco were the top

risk factors driving the these diseases.



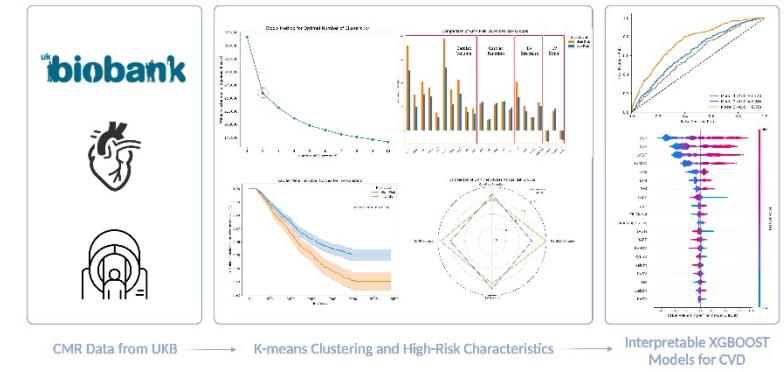
Conclusion: The global decline in age-standardised CVD and cancer burdens, reflecting advancements in medical care, is offset by rising crude rates, reflecting the impact of an aging, growing global population.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	46
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EFFECT OF SEAL OIL SUPPLEMENTATION ON LIPID PROFILE MARKERS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS
Author Block:	Mariano Gallo Ruelas, Mir wajid Majeed, Ivo Queiroz, Arthur Tavares, Maria Luiza Rodrigues Defante, Túlio Pimentel, Lucas Mendes Barbosa, Nickolas Ricardo de Macêdo, Júlia Dos Santos Monteiro, Sabrina Lucas, Melissa Chacón, Cleyton Lima, Beatriz Ximenes Mendes, Beatriz Accioly, Emanuel Leão, Instituto de Investigación Nutricional, Lima, Peru
Abstract Body:	**Background:** Seal oil is commonly used as a dietary supplement with claimed cardiovascular health benefits, but evidence-based recommendations are lacking. This systematic review aimed to evaluate the effect of oral seal oil supplementation on lipid profile markers **Methods:** A systematic search was conducted in PubMed, Embase, and Cochrane until August 2024. Only randomized controlled trials (RCTs) comparing seal oil to placebo or vegetal oil were included. A random-effects meta-analysis of continuous outcomes was used, and trial sequential analysis was performed to assess robustness. The certainty of evidence (CoE) was evaluated using the Grading of Recommendations, Assessment, Development, and Evaluations. This trial was registered in the International Prospective Register of Systematic Reviews: Number CRD42024583739 **Results:** Nine RCTs were included in the review after screening. A total of 461 patients were included, and 264 were randomized for Seal Oil. Seal oil showed no significant effect on LDL-C (MD -0.08 mmol/L, 95% CI [-0.21, 0.04]; CoE: Low) or total cholesterol (MD -0.11 mmol/L, 95% CI [-0.33, 0.11]; CoE: Low). However, there were significant reductions in triglycerides (MD -0.19 mmol/L, 95% CI [-0.30, -0.08]; CoE: Moderate; Fig: 1A) and slight

increases in HDL-C (MD 0.07 mmol/L, 95% CI [0.01, 0.14]; CoE: Very low)
Conclusion: Seal oil likely results in a small triglyceride reduction with minimal effect on LDL-C and total cholesterol, though its impact on HDL-C remains uncertain

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	48
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	MACHINE LEARNING-BASED INTEGRATION OF CARDIAC MAGNETIC RESONANCE PHENOTYPES FOR ENHANCED CARDIOVASCULAR RISK PREDICTION: A UK BIOBANK POPULATION STUDY
Author Block:	Peiqi Liu, Chang Liu, Yao Ma, Zhi Lv, Kexin Li, Mengyao Qi, Zi Kou, Pei Wang, Dengfeng Gao, Department of Cardiology, The Second Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China
Abstract Body:	**Background:** Cardiac magnetic resonance (CMR) has shown strong diagnostic capabilities in cardiovascular diseases (CVD), yet the phenotypic characteristics in high-risk populations and its predictive value remain incompletely characterized, warranting further study. **Methods:** Participants from the UK Biobank population imaging study were included. K-means clustering was used to determine phenotypic groups, and three progressive prediction models (Model 1: traditional risk factors; Model 2: added echocardiographic data; Model 3: added CMR data) were evaluated using area under the receiver operating characteristic curve (AUC). **Results:** During a median follow-up period of 6 years, the incidence of CVD was 5.4% (898 of 16,651). K-means clustering identified two distinct phenotypic groups. The high-risk phenotype was characterized by increased cardiac volumes, impaired cardiac function, a tendency toward left ventricular hypertrophy, and reduced left ventricular strain (all $P < 0.001$). Model 3 demonstrated superior predictive performance for CVD, particularly for heart failure (AUC: 0.89, 95% CI: 0.80-0.95) compared to Model 1 (AUC: 0.66, 95% CI: 0.62-0.70) and Model 2 (AUC: 0.82, 95% CI: 0.72-0.91). Higher age, systolic blood pressure, left ventricular wall thickness and mass-to-volume ratio contributed most to increased CVD risk prediction. **Conclusion:** Integrating CMR phenotypes with machine learning

significantly improves cardiovascular risk stratification and prediction.



Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	49
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	RELATIONSHIP BETWEEN THE CONSUMPTION OF ULTRA-PROCESSED FOODS AND HEALTH OUTCOMES IN THE GENERAL POPULATION: AN EXPOSURE-EFFECT META-ANALYSIS
Author Block:	Shan Zeng, ling lin, Zexuan Wang, Miao Zhang, Zhaolan Feng, Jiaxue Xu, Lin Li, Huabin He, Deju Zhang, Wenli Gu, Xiang Gu, Xiaoping Yin, Peng Yu, Zhiwei Yan, Zhang Jun, Xiao Liu, Department of Cardiology, Sun Yat-sen Memorial Hospital of Sun Yat-sen University, Guangzhou, China
Abstract Body:	**Background:** Ultra-processed foods (UPFs) consumption is increasing, but their relationship to health outcomes remains uncertain. This study aimed to comprehensively investigate the association between UPFs consumption and health outcomes. **Methods:** In this systematic review and meta-analysis, we conducted a comprehensive search of PubMed, Embase, and the Cochrane Library for prospective cohort studies up to April 1, 2024, reporting the association between UPFs consumption and health outcomes. Registration: PROSPERO (registration number: CRD 42024573976). Effect sizes were summarized using DerSimonian-Laird models. Quality of evidence was assessed using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system. **Results:** A total of 41 prospective cohort studies involving 828,6940 participants were included. UPFs consumption was associated with hypertension (Hazard ratio [HR]=1.12, 95% confidence interval [CI] 1.02-1.23), cardiovascular events (HR=1.30, 95% CI 1.14-1.48), cancer events (HR=1.11, 95% CI 1.02-1.21), obesity/overweight (HR=1.23, 95% CI 1.17-1.30), metabolic syndrome (MetS) /diabetes (HR=1.25, 95% CI 1.07-1.45), depression/anxiety (HR=1.27, 95% CI 1.15-1.40), digestive diseases

(HR=1.31, 95% CI 1.16-1.48) and all-cause mortality (HR=1.23, 95% CI 1.14-1.32). Each additional 100 g/day of UPFs consumption was associated with a 14.5% higher risk of hypertension, 5.9% of cardiovascular events, 1.2% of cancer events, 19.5% of digestive diseases, and 2.6% of all-cause mortality. GRADE assessment indicated high to moderate certainty for most outcomes, except low certainty for MetS/diabetes.

Conclusion: Our results suggest high-moderate certainty for the association of UPFs consumption with health adverse outcomes, including cardiovascular events, cancer events, obesity/overweight, depression/anxiety, digestive diseases, and all-cause mortality, except for MetS/diabetes with low evidence. Further prospective research with standardized UPFs measurements is needed.

Session Title:	**Friday Poster Session**
Session Time:	Friday, May 9, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	50
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CHARACTERIZATION OF MYOCARDIAL MICROINJURY AFTER STRENUOUS EXERCISE IN ELITE-LEVEL ROWERS: TEMPORAL AND SEX DIFFERENCES
Author Block:	Shiying Yan, Zhiwei Yan, Xiao Liu, Department of Cardiology, Sun Yat-sen Memorial Hospital of Sun Yat-sen University, Guangzhou, China
Abstract Body:	**Background:** Acute strenuous exercise induces myocardial micro-injury, but the time points and sex impact of recovery are currently unknown. This study assessed the temporal trend and sex differences in myocardial micro-injury recovery among elite rowers after strenuous exercise. **Methods:** Thirty elite rowers underwent a one-week high-intensity training regimen followed by a 2000-meter rowing ergometer test. Heart rate, hemoglobin, blood urea, and myocardial injury markers: cardiac troponin I (cTnI), myoglobin (Myo), creatine kinase-MB (CK-MB), creatine kinase (CK), and N-terminal B-type natriuretic peptide precursor (NT-proBNP) were assessed at baseline, immediately post-training (0h), post-training 6h (6h), and post-training 24h (24h). **Results:** Among 30 rowers (mean age, 19.09 years; 50% males), cTnI increased significantly from a baseline of 0.010 ng/mL to 0.035 ng/mL post-training immediately ($P<0.01$), with a continuous increase to 0.071 ng/mL at 6h ($P<0.01$), returning to baseline by 24h ($P>0.05$); Myo levels increased from a baseline of 6.27 ng/mL to 23.35 ng/mL post-training immediately ($P<0.01$), with a continuous increase to 28.80 ng/mL at 6h ($P<0.01$), decreasing to 24.35 ng/mL at 24h ($P<0.01$); CK-MB levels increased from a baseline of 1.16 ng/mL to 4.75ng/mL post-training immediately ($P<0.01$), with a continuous increase to 5.17 ng/mL at 6h ($P<0.01$), decreasing to 4.39 ng/mL at 24h ($P<0.01$); NT-proBNP levels increased from a baseline of 12.50 pg/mL to 53.95

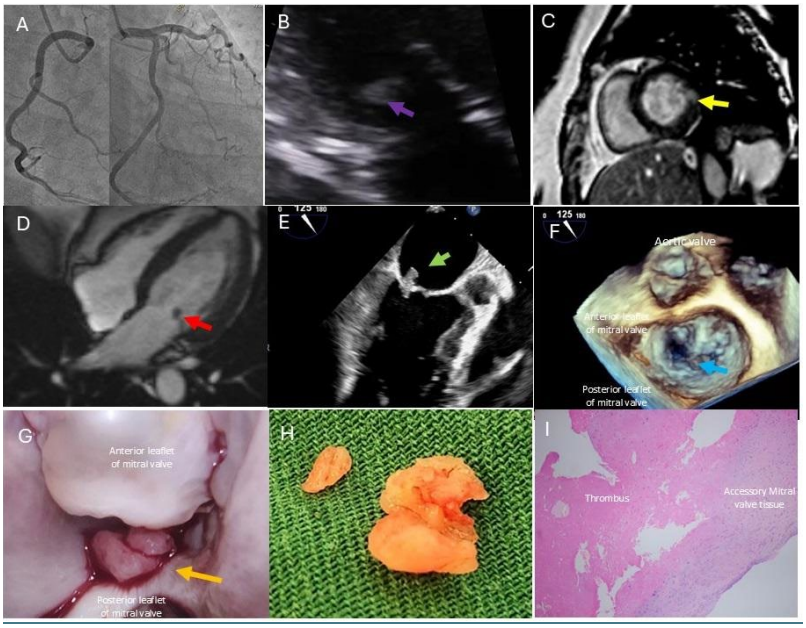
pg/mL post-training immediately (P<0.01), with a continuous increase to 62.20 pg/mL at 6h (P<0.01), decreasing to 38.95 pg/mL at 24h (P<0.01); CK levels increased from a baseline of 123.30 U/L to 294.65 U/L post-training immediately (P<0.01), with a continuous increase to 304.00 U/L at 6h (P<0.01), decreasing to 271.55 U/L at 24h (P<0.01). Males exhibited higher levels of myocardial injury markers (cTnI, Myo, CK-MB, CK) and blood urea levels post-training and sustained elevation at 24h, indicating slower recovery (all P<0.05).

Conclusion: Markers of myocardial injury increase immediately and 6 hours after strenuous exercise, and decreased at 24h. Males have a higher degree of strenuous exercise induced micro-injury.

Saturday Oral Abstract and Case Presentations

Session Title:	**Challenging Cases in Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases**
Session Time:	Saturday, May 10, 2025, 8:30 am - 9:20 am
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	MULTIMODALITY IMAGING IN THE ASSESSMENT OF MINOCA: RARE CASE OF THROMBOEMBOLISM ORIGINATING FROM ACCESSORY MITRAL VALVE TISSUE
Author Block:	En Ze Chan, Yee Phong Lim, Wei Liang Benjamin Tung, Ping Chai, Raymond Ching-Chiew Wong, Giap Swee Kang, Xin Chun Amelia Goh, William K. F. Kong, Ching Hui Sia, National University Heart Centre, Singapore, Singapore
Abstract Body:	**Background:** Accessory mitral valve tissue (AMVT) is a rare congenital anomaly. We report a rare case of AMVT causing MINOCA due to thrombus embolism. **Case:** A 51-year-old lady presented with angina. High-sensitive Troponin I was elevated. Transthoracic echocardiogram demonstrated a left ventricular ejection fraction of 65% with no regional wall motion abnormality and suspicion of posterior mitral valve (MV) leaflet lesion. A coronary angiogram shows minor coronary artery disease. Therefore, a diagnosis of MINOCA was made. Cardiac magnetic resonance imaging (CMRI) shows focal transmural late gadolinium enhancement of the basal anterolateral, suggesting myocardial injury due to the NSTEMI. The CMRI also indicates a mobile mass attached to the tip of the posterior MV. Therefore, we proceeded with a transesophageal echocardiogram, which showed a bilobed elongated mobile mass arising from the tip of the P2 leaflet of the mitral valve on the atrial aspect. **Decision-making:** The patient underwent minimally invasive excision of an MV mass. The mass, comprising two lobes, was attached to the P2 mitral leaflet and had an irregular papillary surface. Histopathology revealed normal mitral valve tissue with an attached thrombus. The patient was well postoperatively, and echocardiography showed good MV function with no residual mass. **Conclusion:** We emphasize the role of multimodal cardiac imaging in diagnosing MINOCA's causes. Surgical removal of the mitral valve mass is

crucial for diagnosis.



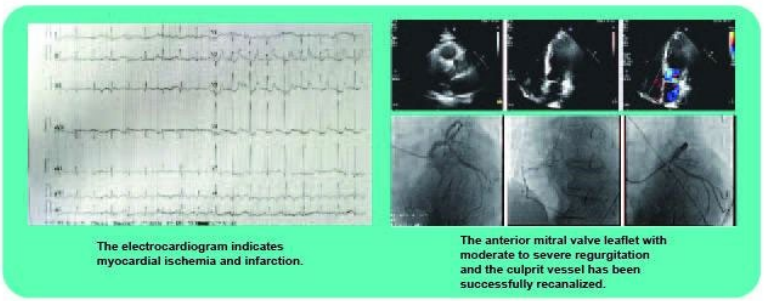
Session Title:	**Challenging Cases in Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases**
Session Time:	Saturday, May 10, 2025, 8:30 am - 9:20 am
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	NOVEL INTERVENTIONAL TECHNIQUE FOR VALVE-IN-VALVE-IN-VALVE (VIVIV) TRANSCATHETER AORTIC VALVE REPLACEMENT (TAVR) IN THE MANAGEMENT OF VALVE DISLODGEMENT IN AN ELDERLY PATIENT WITH SEVERE AORTIC STENOSIS
Author Block:	Ravi Kalra, Prashant BHARADWAJ, Amanpreet Singh Wasir, Bharati Vidyapeeth University Medical College, Pune, India
Abstract Body:	**Background:** Transcatheter aortic valve replacement (TAVR) is the preferred treatment for severe aortic stenosis (AS) in symptomatic elderly patients with comorbidities. Valve-in-Valve (ViV) TAVR has emerged as an option for failing bioprosthetic valves, often preferred over redo-surgical aortic valve replacement (SAVR) in patients with surgical risk. Valve-in-Valve-in-Valve (ViViV) TAVR is rare with only a few cases. We report a case of valve dislodgement successfully managed using a novel interventional technique for ViViV TAVR. **Case:** A 75-year-old man with a history of hypertension, diabetes, coronary artery disease, chronic kidney disease, and obstructive pulmonary disease presented with chest pain and shortness of breath. History revealed percutaneous transluminal coronary angioplasty (PTCA) to the right coronary artery and circumflex artery, coronary artery bypass graft surgery, and SAVR. The patient had severe AS due to bioprosthetic valve degeneration, 99% in-stent restenosis of circumflex artery, and 80% long, calcific ostio-proximal left anterior descending (LAD) artery disease with occluded grafts. The fractional flow reserve was 0.78 in the LAD and creatinine was 2mg/dL. **Decision-making:** After PTCA to circumflex artery and rotablation to LAD, ViV TAVR was planned. A 22mm self-expanding valve was deployed 5mm below the surgical valve ring but got dislodged in the ascending aorta due to the incomplete release of the last tentacle from the release system. Subsequently, a second self-expanding bioprosthetic valve was taken over the wire through the previous prosthesis, positioned across the aortic valve, and deployed with

post-dilatation to 20mm. There was no valvular leak with a post-deployment trans-aortic gradient= 32 mmHg. Fracture of the surgical valve ring using an Atlas balloon was completed, reducing the gradient to 11 mmHg. Post-procedure, the patient was asymptomatic.

Conclusion: This case illustrates the successful management of valve dislodgement using a novel interventional technique for ViViV TAVR. This technique involved crossing the dislodged valve with a second prosthesis and fracturing the surgical valve ring to achieve optimal hemodynamics.

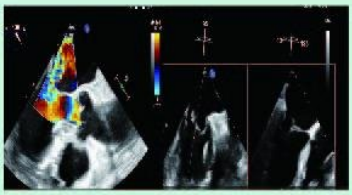
Session Title:	**Challenging Cases in Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases**
Session Time:	Saturday, May 10, 2025, 8:30 am - 9:20 am
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	TRANSCATHETER EDGE-TO-EDGE REPAIR FOR SEVERE MITRAL REGURGITATION WITH PAPILLARY MUSCLE RUPTURE POST-ACUTE MYOCARDIAL INFARCTION
Author Block:	Jun Chen, Qiong Zhan, Qingchun Zeng, Department of Cardiology, Nanfang Hospital, Southern Medical University, Guangzhou, China
Abstract Body:	**Background:** Papillary muscle rupture combined with severe mitral regurgitation is a serious mechanical complication after acute myocardial infarction (AMI). **Case:** A 75-year-old male patient was admitted to the hospital, reporting a two-day history of persistent pressure-like discomfort localized in the precordial region. It was observed that the patient exhibited a body temperature of 38℃, a tachycardic heart rate of 140 beats per minute, and a blood pressure reading of 140/92 mmHg. Cardiac biomarkers such as cardiac troponin T (cTnT) at 1.5 ng/mL and N-terminal pro b-type natriuretic peptide (NT-proBNP) at 3447 pg/mL were observed. **Decision-making:** Post-angiography, and revascularization were achieved for the severely stenosed and occluded vessels. Upon assessing the anatomical criteria for TEER, it was determined that the site of prolapse, leaflet morphology, and orifice dimensions were conducive to the TEER procedure. Following the successful management of the infection, the TEER intervention was executed with precision, involving the implantation of two MitraClip devices, which effectively reduced the severity of mitral regurgitation from grade 4+ to grade 1+. **Conclusion:** TEER emerges as a safer and more viable alternative for individuals who present a high surgical risk or possess contraindications to

conventional surgical procedures.



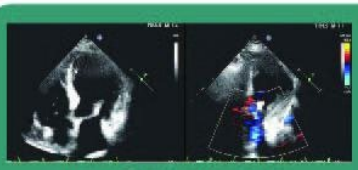
The electrocardiogram indicates myocardial ischemia and infarction.

The anterior mitral valve leaflet with moderate to severe regurgitation and the culprit vessel has been successfully recanalized.

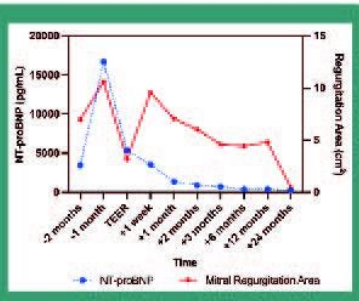


Rupture of the mitral valve papillary muscle and severe mitral regurgitation.

The transcatheter edge-to-edge repair (TEER) procedure demonstrats the implantation of the MitraClip, resulting in a reduction of mitral regurgitation.



Transthoracic echocardiographic (TTE) after transcatheter edge-to-edge repair (TEER).

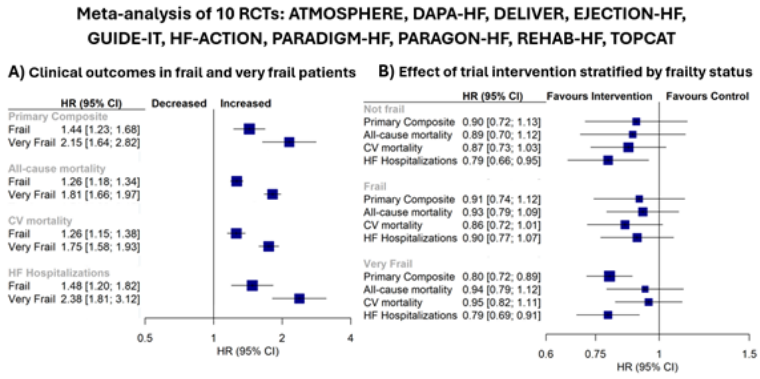


Changes in NT-proBNP levels and mitral regurgitation area before and after transcatheter edge-to-edge repair (TEER).

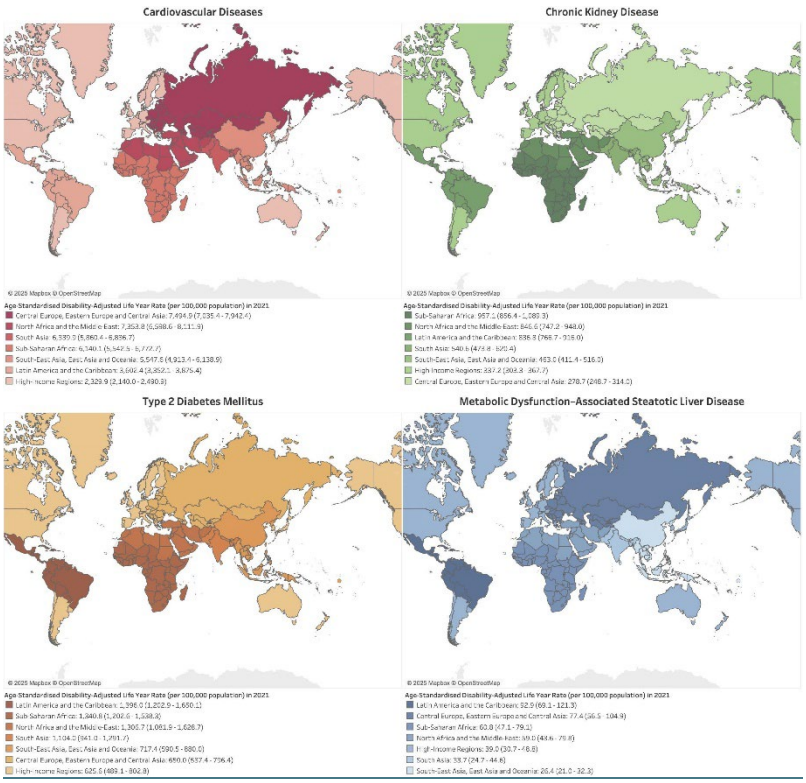
Session Title:	**Challenging Cases in Interventions and Ischemic Heart Diseases and Multimodal Imaging and Valvular Diseases**
Session Time:	Saturday, May 10, 2025, 8:30 am - 9:20 am
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	EVERY DROP MATTERS : ZERO-CONTRAST IVUS GUIDED ANGIOPLASTY IN A HIGH-RISK PATIENT WITH RENAL ARTERY IN-STENT RESTENOSIS AND SEVERE RENAL DYSFUNCTION.
Author Block:	Pankaj Banotra, Uday B. Khanolkar, Karthikeyan Thirunavukkarasu, Anamika Bharti, Devi Shetty, Narayana Institute of cardiac sciences, Bangalore, India
Abstract Body:	**Background:** Renal artery stenting is a viable option for patients with hemodynamically significant renal artery stenosis (RAS) with deteriorating renal function causing refractory hypertension despite guideline-directed medical therapy. Traditional renal angioplasty procedures often require the use of a contrast medium, posing a risk of contrast-induced nephropathy in patients with pre-existing renal insufficiency. **Case:** We describe a 60-year-old male with hypertension, diabetes, and declining renal function, who presented with refractory hypertension and flash pulmonary edema. Diagnostic imaging revealed non viable right kidney, 90% in-stent restenosis (ISR) in the left renal artery and double vessel coronary artery disease (CAD).Given the risk of contrast-induced nephropathy (CIN), a zero-contrast IVUS-guided coronary and renal angioplasty was performed. **Decision-making:** Using a femoral approach and high-definition IVUS, we conducted coronary stenting with a metallic silhouette technique and subsequently performed renal angioplasty and stenting. The procedure involved pre-dilation, stenting with a drug-eluting stent (DES), and post-dilation.At three months, the patient showed significant renal function improvement (serum creatinine of 1.07 mg/dL, eGFR of 77 mL/min/1.73 m^2) and better blood pressure control with two antihypertensive medications. **Conclusion:** Zero-contrast IVUS-guided angioplasty proved effective in managing complex renal and coronary artery disease while minimizing the risk of CIN. This approach may offer benefits for similar high-risk patients, though further research is needed to confirm its broader applicability.

Session Title:	**SCS YIA Competition**
Session Time:	Saturday, May 10, 2025, 9:30 am - 10:20 am
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	CLINICAL OUTCOMES OF PATIENTS WITH HEART FAILURE ACROSS THE FRAILTY SPECTRUM: A META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS
Author Block:	Haowen Jiang, Jie Jun Wong, Ru-San Tan, Fei Gao, Loon Yee Teo, Angela Koh, National Heart Centre Singapore, Singapore, Singapore, Duke-NUS Medical School, Singapore, Singapore
Abstract Body:	**Background:** Heart failure (HF) patients with concomitant frailty are often under-represented in randomized controlled trials (RCTs) of HF therapies, which cause treatment ambiguity. We studied the impact of frailty on outcomes in HF RCTs. **Methods:** Systematic review of outcomes of HF RCTs stratified by assessable non-frail, frail and very frail status. Outcomes were a composite of cardiovascular (CV) mortality and HF hospitalization (HHF), CV mortality, HHF, and all-cause mortality. Hazard ratios (HRs) and their 95% confidence intervals were pooled. **Results:** Ten RCTs of pharmacological (7) and rehabilitative (3) interventions were selected, with a total of 38,821 HF patients (34.4% frail; 24.7% very frail). Compared with non-frail, both frail and very frail subgroups had significantly increased risk of all outcomes (Figure A). Trial interventions reduced pooled risks of composite outcome (HR 0.80 [0.72 - 0.89], p <0.01) and HHF (HR 0.79 [0.69-0.91], p <0.01) in very frail, and HHF (HR 0.79, [0.66-0.95], p=0.01) in non-frail patients (Figure B); no significant treatment differences were seen for other outcomes across all frailty subgroups (Figure B). There was no interaction between frailty and treatment effects for all outcomes (all $p_{interaction}$ >0.05). **Conclusion:** Frail and very frail HF patients are at increased risk of adverse outcomes. In very frail patients, HF interventions reduce risks of the composite

outcome and HHF with neutral impact on mortality.



Session Title:	**SCS YIA Competition**
Session Time:	Saturday, May 10, 2025, 9:30 am - 10:20 am
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE EVOLVING BURDEN OF CARDIOVASCULAR-KIDNEY-LIVER-METABOLIC DISEASES: TRENDS FROM 1990 TO 2050
Author Block:	Bryan Chong, Jayanth Jayabaskaran, Srinithy Nagarajan, Mark Muthiah, Mark Y. Chan, Nicholas Chew, Yong Loo Lin School of Medicine, National University Singapore, Singapore, Singapore, National University Heart Centre, National University Health System, Singapore, Singapore
Abstract Body:	**Background:** Cardiovascular-Kidney-Liver-Metabolic health represents the synergistic impact of cardiometabolic diseases and their risk factors on global morbidity. **Methods:** Historical and forecast data from 1990-2050 were obtained from the Global Burden of Disease 2021 study to examine mortality and disability-adjusted life years (DALYs) associated with cardiovascular disease (CVD), chronic kidney disease (CKD), type 2 diabetes mellitus (T2DM) and metabolic dysfunction-associated steatotic liver disease (MASLD), stratified by age, region, health systems and sex. **Results:** In 2021, age-standardised DALY rates per 100,000 population were highest for CVDs (5,056 [4,760 to 5,359]), followed by T2DM (872 [735 to 1,045]), CKD (530 [486 to 577]), and MASLD 42 (34 to 53). However, only CVDs saw a fall in age-standardised DALY rates from 1990-2021 (-33.0% [-36.5 to -29.4]). Regions with advanced health systems saw the greatest drop in age-standardised DALY rates due to CVD from 1990-2021, however, they also experienced the greatest rise in CKD, MASLD, and T2DM. From 1990-2021, age-standardised DALY rates of risk factors associated with CVDs fell, but rose for CKD, MASLD, and T2DM - particularly from high body mass index and fasting plasma glucose. These trends are expected to persist into 2050.



Conclusion: While CVD rates have fallen from better medical treatments, the rise in CKD, T2DM, and MASLD reflects inadequate primary prevention, early screening, and environments that promote cardiometabolic risk.

Session Title:	**SCS YIA Competition**
Session Time:	Saturday, May 10, 2025, 9:30 am - 10:20 am
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE IMPACT OF TOBACCO USE ON METABOLISM AND EARLY CARDIAC HEALTH IN COMMUNITY ADULTS
Author Block:	Jie Jun Wong, Yu Feng Tung, Hongzhou Zhang, Fei Gao, Shuang Leng, XIAODAN ZHAO, Hai Ning Wee, Kee Voon Chua, Ru San Tan, Liang Zhong, Jean-Paul Kovalik, Angela Su-Mei Koh, National Heart Centre Singapore, Singapore, Singapore, Duke-NUS Medical School, Singapore, Singapore
Abstract Body:	**Background:** Tobacco-related adverse cardiac remodeling is linked to molecular targets identified in animal models. Hypothesizing that smoking produces distinct myocardial metabolic perturbations among preclinical adults, we employed LV global longitudinal strain (LVGLS) to examine the effects of smoking on early cardiac function and metabolism. **Methods:** Community adults without cardiovascular disease (CVD) underwent cardiovascular magnetic resonance and serum metabolomics profiling. **Results:** Among 202 participants (46.0% females, 70.2 years), smokers (n=31) were more often males (90.3% vs. 47.4% p<0.001) but were similar in age and body habitus than non-smokers. Smokers had poorer LVGLS (-18.9% vs -21.3% adj. p=0.004) and ventriculoarterial coupling than non-smokers. Poorer LVGLS was linked with increased long-chain acylcarnitines (LCAC) levels, suggesting impaired β-oxidation. Higher LCAC levels were also observed in smokers. Among smokers, poorer LVGLS was associated with significantly lower C22:2 levels (OR=0.040, adj. p<0.001) without accompanying increases in other ACs. **Conclusion:** Reduced LVGLS, in tandem with increased LCAC, were observed among smokers without CVD. Lower C22:2 levels further distinguished smokers with the poorest LVGLS. These patterns suggest reduced mitochondrial β-oxidation with substrate divergence into other pathways. Insights into cardiac energy metabolism may reveal preventive targets to mitigate smoking-related early cardiac dysfunction.

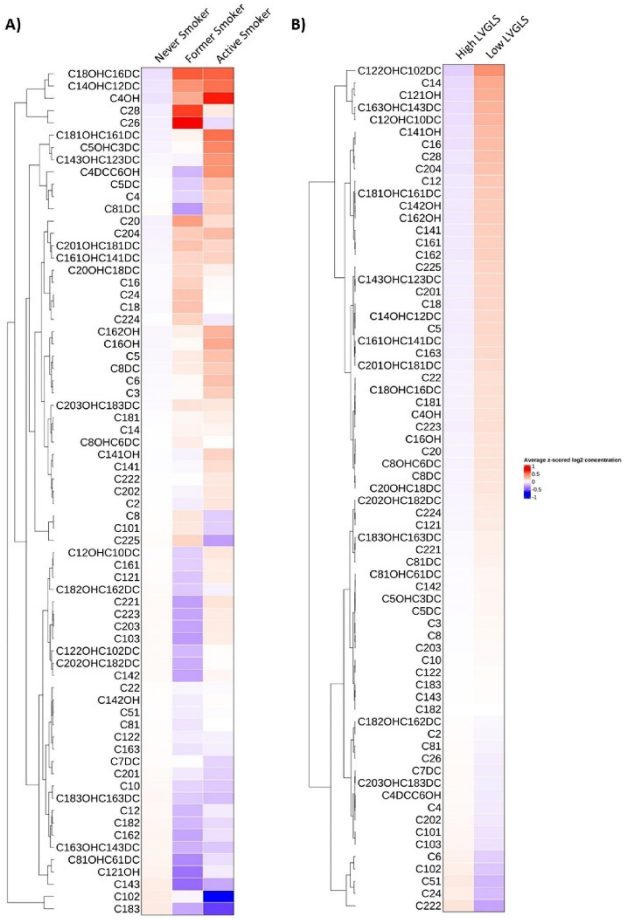


Figure A. Heatmap of acylcarnitine profiles according to smoking status and left ventricular global longitudinal strain. Metabolite data was normalized via log2 transformation, standardized by z-score to identify a common scale, averaged, and analyzed according to smoking status (**A**) and LVGLS (**B**). The data presented ranges from -0.7 to 0.7. Darker red and blue cells represent higher and lower metabolite levels respectively. (**A**) Levels of long-chain acylcarnitines C14-OH/C12-DC (OR=1.201, adj. p=0.004) and C18-OH/C16-DC (OR=1.371, adj. p<0.001) were higher among former and active smokers compared to never-smokers, suggesting fatty acid oxidation impairments. (**B**) Levels of C12:2-OH/C10:2-DC (OR=1.173, adj. p<0.001), C12:1-OH (OR=1.023, adj. p=0.008), C12-OH/C10-DC (OR=1.404, adj. p=0.021), C14 (OR=1.068, adj. p=0.004), C16:3-OH/C14:3-DC (OR=1.849, adj. p=0.005) were higher among individuals with poorer LVGLS.

Session Title:	**SCS YIA Competition**
Session Time:	Saturday, May 10, 2025, 9:30 am - 10:20 am
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	ASSOCIATION OF SPECTRAL E/(E'×S') RATIO WITH HEART FAILURE HOSPITALIZATIONS IN ASIAN PATIENTS WITH HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Tony Li, Raymond Ching-Chiew Wong, Novi Yanti Sari, Bui Khiong Chung, Andre Seah, Yoke-Ching Lim, Perryn Ng, James Wei Luen Yip, Kian Keong Poh, William K. F. Kong, Weiqin Lin, Ching Hui Sia, Tiong Cheng Yeo, Department of Cardiology, National University Heart Centre, Singapore, Singapore, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore
Abstract Body:	**Background:** A novel dimensionless tissue Doppler index, spectral E/(e'×S') has been proposed to assess left ventricular filling pressures and has been shown to be associated with cardiac events in patients with asymptomatic heart failure. This study aimed to investigate whether spectral E/(e'×S') was associated with heart failure hospitalization in Asian patients with HCM. **Methods:** This was a retrospective study involving 491 patients diagnosed with HCM between 2010 and 2022 at a tertiary cardiac centre. Spectral E/(e'×S') was assessed using the average left ventricular (LV) early diastolic transmitral/mitral annular velocity (E/e') ratio divided by the systolic mitral annular velocity (S'). We tested spectral E/(e'×S') against outcomes of (a) eventual heart failure hospitalization and (b) a composite of adverse outcomes including all-cause mortality, VT/VF events, appropriate device therapy if an ICD was implanted, stroke and heart failure hospitalization. **Results:** Receiver operating characteristic (ROC) analysis identified an optimal cut-off value of 2.30 (82.0% sensitivity, 71.7% specificity) for average E/(e'×S'). The incidence of heart failure free survival and composite event free survival over a follow-up of 3.52 ± 2.51 years was 81% and 60% for patients with abnormal septal E/(e'×S') ≥ 2.3 versus 98% and 84% for patients with a normal average E/(e'×S') ($p<0.001$). Multivariable Cox regression analyses adjusting for age, sex, LV ejection fraction, LV mass index, atrial fibrillation and a history of prior heart failure showed that average E/(e'×S') retained an independent

association with eventual heart failure hospitalization.
Conclusion: In Asian patients with HCM, spectral E/(e'×S') was independently associated with heart failure hospitalization.

Session Title:	**SCS YIA Competition**
Session Time:	Saturday, May 10, 2025, 9:30 am - 10:20 am
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	MYOCARDIAL DEFORMATION ASSESSED BY CMR FEATURE TRACKING IN PATIENTS WITH MYOCARDIAL INFARCTION WITH NON-OBSTRUCTIVE CORONARY ARTERIES
Author Block:	Pei Yang, Mengyao Hu, Xuan Xiao, Shuang Leng, XIAODAN ZHAO, Ru-San Tan, Angela Koh, Dexiang Zong, Lianggeng Gong, Liang Zhong, Department of Radiology, The Second Affiliated Hospital, Jiangxi Medical College, Nanchang Universit, Nanchang, China, National Heart Centre Singapore, Singapore, Singapore
Abstract Body:	**Background:** Cardiovascular magnetic resonance (CMR) feature tracking (FT)-derived myocardial strains may detect myocardial damage in Myocardial Infarction with Non-Obstructive Coronary Arteries (MINOCA). We aimed to establish diagnostic strain thresholds in MINOCA. **Methods:** 20 healthy volunteers (age 55±11 years), 40 patients with MINOCA (age 55±12 years), and 42 patients with myocardial infarction with obstructive coronary arteries (MIOCA) (age 58±11 years) underwent CMR. Peak left ventricular global longitudinal (GLS), circumferential (GCS), and radial (GRS) strains were measured using FT. Receiver operating characteristics (ROC) analyses were performed. **Results:** GLS was -15.1±2.6% in volunteers, and significantly reduced in MINOCA (-10.1±1.9%) and MIOCA (-4.6 ± 1.7%) (both $P < 0.05$). There were similar but nonsignificant trends of decremental GCS (volunteers -18.0 ± 2.5%; MINOCA -12.7 ± 1.2%; MIOCA -9.0 ± 0.7%) and GRS (volunteers 36.2 ± 2.0%; MINOCA 29.8 ± 3.2%; MIOCA, 18.2±2.5%). For discriminating MINOCA vs. MIOCA, sensitivity, specificity and area under ROC curve (AUROC) for GLS were 85.7%, 62.5%, and 0.804, respectively; GRS, 85.0%, 69.0%, and 0.772; and GCS, 88.1%, 52.5%, and 0.729. **Conclusion:** In MINOCA, CMR FT-derived peak LV global strains identify

myocardial damage, and GLS appears most promising for diagnostic workup of MINOCA vs. MIOCA.

Session Title:	**SCS YIA Competition**
Session Time:	Saturday, May 10, 2025, 9:30 am - 10:20 am
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	COMPARISON OF PATIENTS WITH AND WITHOUT CHEST PAIN PRESENTING TO THE EMERGENCY DEPARTMENT FOLLOWING ST-ELEVATION MYOCARDIAL INFARCTION: INSIGHTS FROM A NATIONAL MYOCARDIAL INFARCTION REGISTRY
Author Block:	Finn Teo, Hon Jen Wong, Chun En Yau, Chen Ee Low, Yao Hao Teo, Yao Neng Teo, Ping Chai, Poay Huan Loh, James Wei Luen Yip, Andrew Ho, David C.G. Foo, Pow-Li Chia, Patrick Zhan-Yun Lim, Khung Keong Yeo, Weien Chow, Daniel Chong, Derek J. Hausenloy, Mark Chan, Ching Hui Sia, National University of Singapore, Singapore, Singapore, National University Heart Centre, Singapore, Singapore
Abstract Body:	**Background:** A significant proportion of patients with ST-segment elevation myocardial infarction (STEMI) present atypically without chest pain. This can affect the care they receive and ultimately their short and long-term outcomes. We analysed a national registry to characterise the demographics, processes-of-care, and outcomes of non-chest pain (NCP) STEMI presentations. **Methods:** Retrospective data for all STEMI cases from 2007 to 2020 were analysed from the Singapore Myocardial Infarction Registry. Exclusion criteria included inpatient onset and interfacility transfers. Univariate and multivariate logistic models were used to identify factors associated with NCP presentation. Cox proportional hazard models were constructed to investigate the prognostic effect of NCP on short and long-term mortality outcomes. Odds ratios (ORs) and hazard ratios (HRs) were calculated along with their 95%-confidence intervals (95%CI). **Results:** 14.0% of 22,803 first-onset STEMI patients presented with NCP. These patients were older (70 vs 59 years, p<0.001), more likely to be female (36% vs 16%, p<0.001), Chinese (70% vs 63%, p<0.001) and have never smoked (55% vs 39%, p<0.001). The prevalence of diabetes (45% vs 35%, p<0.001) and hypertension (66% vs 52%, p<0.001) was also higher. They were also less likely to have other typical symptoms such as dyspnoea (48% vs 57%,

p<0.001) and diaphoresis (23% vs 66%, p<0.001). They were less likely to receive percutaneous coronary intervention (36% vs 77%, p<0.001), and had longer door-to-balloon times (100 min vs 70 min, p<0.001). Predictors of NCP presentation included advanced age ≥65 years, female gender and hypertension. After adjusting for differences in baseline risk factors and clinical characteristics, NCP presentation was associated with a higher risk of all-cause mortality at timepoints of 30-days, 1-year, 5-years and 10-years (HR 2.27, 95%CI 2.14 to 2.41, p<0.001).

Conclusion: After adjusting for baseline risk factors and treatments received, NCP presentation was still independently associated with worse survival outcomes. Further research is required to risk-stratify these patients and address the suboptimal treatment rates and outcomes.

Session Title:	**Cardiac Arrhythmias and Heart Failure and Cardiomyopathies Oral Abstracts**
Session Time:	Saturday, May 10, 2025, 3:00 pm - 3:50 pm
Topic 1:	Cardiac Arrhythmias
Publishing Title:	DE NOVO ARTIFICIAL INTELLIGENCE GUIDED PULSED FIELD ABLATION OF PERSISTENT ATRIAL FIBRILLATION USING A NOVEL AUTOMATED PEAK FREQUENCY ANNOTATION ALGORITHM- EVIDENCE FOR A UNIQUE SIGNATURE FOR ATRIAL FIBRILLATION TERMINATION SITES
Author Block:	Bernard B C Lim, Elizabeth HT Lim, John Askins, Allison Collette, Decatur Memorial Hospital, Decatur, IL, USA, University of Dundee, Dundee, United Kingdom
Abstract Body:	**Background:** Persistent atrial fibrillation (AF) remains a significant challenge and frequently requires substrate ablation. Because of its efficiency, pulsed field ablation (PFA) has been used for persistent AF ablation. The Tailored AF trial showed that targeting areas of spatial temporal dispersion (STD) is more successful. Furthermore, omnipolar technology with emphasis mapping has been shown to define substrates better in AF. We sought to see in persistent AF patients whether combining data from these different modalities may increase the specificity of ablation targets by PFA. **Methods:** 18 patients with persistent AF were enrolled. Mapping was performed with the HD Grid™ and Ensite X™ system. Areas exhibiting STD were identified in real time with the Volta VX1 software and annotated on the map. PFA was performed in AF, using the Farapulse™ system. The maps were retrospectively analysed with a novel peak frequency (PF) annotation software and emphasis maps created to highlight areas of PF and low voltage. **Results:** The distribution of STD was over the posterior and anterior wall, the inferior left atrium (LA) and around the pulmonary veins. Acute AF termination was achieved in 60% of patients. AF termination sites were located in the anteroseptal region, the anterior wall and the inferior LA. Compared to 88 targeted non termination sites, AF termination sites had higher PF (389 +/- 81 Hz vs 202 +/- 51 Hz, p= 0.00005) at low voltage sites (0.43+/- 0.2 mV vs 0.23 +/- 0.06, p=0.015) that were in proximity (3.1 +/- 1.6 mm) to clusters of STD areas. These areas also demonstrated slower conduction (0.53+/- 0.06 mm/ms vs

0.81 +/- 0.15 mm/ms, p=0.0004) with local electrograms showing continuous activation. The clusters of STD in termination sites demonstrated a starburst pattern with marked wavefront direction heterogeneity.

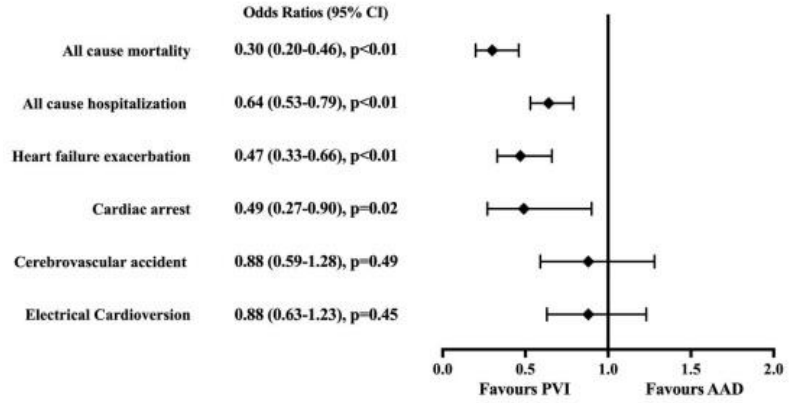
Conclusion: A unique combined approach with PFA and multimodality mapping of persistent AF is safe and effective and demonstrated a unique signature of AF termination sites: zones of high PF and low voltage and low conduction velocity close to clusters of STD. This may help to increase the specificity of STD areas identified by AI mapping and prioritize ablation targets in persistent AF.

Session Title:	**Cardiac Arrhythmias and Heart Failure and Cardiomyopathies Oral Abstracts**
Session Time:	Saturday, May 10, 2025, 3:00 pm - 3:50 pm
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	CHINA MULTI-CENTER COHORT STUDY ON RISK EVALUATION OF ARRHYTHMOGENIC CARDIOMYOPATHY (CHINACORE ACM) REGISTRY
Author Block:	Yuxiao Hu, Zhongli Chen, Anteng Shi, Zemeng Li, Zixian Chen, Bing Yang, Yubi Lin, Guoliang Li, Yifei Li, Xianliang Zhou, Lingmin Wu, Liang Chen, Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China, State Key Laboratory of Cardiovascular Disease, National Center for Cardiovascular Diseases, Beijing, China
Abstract Body:	**Background:** Arrhythmogenic cardiomyopathy (ACM) patients in China exhibit unique genetic and clinical characteristics. There is a lack of prognostic models specific to Chinese ACM patients. This study aims to establish a large, national ACM patient cohort with uniformly collected, high-quality data. **Methods:** This study includes patients with definite or borderline ACM diagnoses from 17 tertiary medical centers across 14 provinces, along with their genotype-positive relatives. At baseline, comprehensive data collection includes medical history, electrocardiograms, Holter recordings, imaging studies, genetic testing, and laboratory evaluations. Outcome data include heart failure events and malignant ventricular arrhythmias (MVA). **Results:** As of September 2024, the registry has enrolled 622 participants, including 552 probands (88.7%) and 70 family members (11.3%) carrying ACM-related variants. Preliminary cohort includes 577 patients (92.8%), of whom 320 (51.4%) were diagnosed with definite ARVC. The median age of symptom onset was 33.0 years (IQR: 22.0-45.0), with 41.6% experiencing arrhythmia-related symptom. Abnormal ECG findings included T-wave inversion (72.7%) and epsilon waves (24.8%) in leads V1-V3. Among the 470 participants with available Holter recordings, 234 (49.8%) had >500 premature ventricular complex (PVCs), and 341 (72.5%) exhibited non-sustained ventricular tachycardia (NSVT). Imaging revealed RV dilatation in 44.6% and LV dilatation in 29.8%, with a mean LVEF of 53.0% ± 14.5%. A total of 130 participants (20.9%) underwent device implantation, the majority of whom (85.4%)

received ICD. Among them, 50 individuals (42%) have the indication for primary prevention. Regarding outcomes, MVA occurred in 33.4%, while 21.9% developed end-stage heart failure (ESHF), including 5.6% who died from heart failure and 16.2% who underwent heart transplantation.
Conclusion: China multi-center cohort study on risk evaluation of ACM (ChinaCORE ACM) registry is a national, longitudinal, observational cohort study. This study contributes to expanding the understanding of the disease spectrum of Chinese ACM patients and improving prognostic predictions.

Session Title:	**Cardiac Arrhythmias and Heart Failure and Cardiomyopathies Oral Abstracts**
Session Time:	Saturday, May 10, 2025, 3:00 pm - 3:50 pm
Topic 1:	Cardiac Arrhythmias
Publishing Title:	CATHETER ABLATION VERSUS ANTIARRHYTHMIC DRUGS FOR ATRIAL FIBRILLATION IN HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Aravinthan Vignarajah, Hermon Kha Kin Wong, Nishanthi Vigneswaramoorthy, Min Choon Tan, Cleveland Clinic Fairview Hospital, Cleveland, OH, USA
Abstract Body:	**Background:** Catheter ablation (CA) for atrial fibrillation (AF) has shown superior outcomes compared to anti-arrhythmic drug (AAD) therapy. However, data on the long-term effects of CA in hypertrophic cardiomyopathy (HCM) are limited. **Methods:** Using the TriNetX network, we identified patients (aged ≥18 years) with AF and HCM who underwent CA or received AAD (without prior CA) between 1/1/2014 and 1/1/2019. Propensity score matching (PSM) was performed. Study outcomes included all-cause mortality and cardiovascular adverse events over a 5-year follow-up period, with a 3-month blanking period following PVI. **Results:** A total of 18,017 eligible patients were identified. After PSM, 796 patients were included in each group. CA for AF was associated with lower odds of 5-year all-cause mortality (OR, 0.30; 95% CI, 0.20-0.46; P < 0.01), all-cause hospitalization (OR, 0.64; 95% CI, 0.53-0.79; P < 0.01), heart failure exacerbation (OR, 0.47; 95% CI, 0.33-0.66; P < 0.01), and cardiac arrest (OR, 0.49; 95% CI, 0.27-0.90; P = 0.02). No significant differences were observed in the risk of cerebrovascular accidents (OR, 0.88; 95% CI, 0.59-1.28; P = 0.49) or AF requiring electrical cardioversion (OR, 0.88; 95% CI, 0.63-1.23; P = 0.45) between the CA and AAD groups. **Conclusion:** CA for AF was associated with better mortality and cardiovascular outcomes in this 5-year propensity score-matched analysis. These findings suggest that CA should be strongly considered to achieve rhythm control in

patients with HCM.



Session Title:	**Cardiac Arrhythmias and Heart Failure and Cardiomyopathies Oral Abstracts**
Session Time:	Saturday, May 10, 2025, 3:00 pm - 3:50 pm
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	IMPACT OF PATHOGENIC VARIANTS ON CLINICAL OUTCOMES IN KOREAN DILATED CARDIOMYOPATHY PATIENTS: INSIGHTS FROM NEXT-GENERATION SEQUENCING
Author Block:	Yu Young Kim, Min Sun Kim, Sun Hack Lee, Jung Hyun Choi, Division of Cardiology, Department of Internal Medicine, Pusan National University Hospital, Pusan, South Korea
Abstract Body:	**Background:** Genetic analysis is crucial for diagnosing dilated cardiomyopathy (DCM), yet its association with clinical outcomes among Korean patients remains understudied. This study evaluated the prevalence of genetic variants and their relationship with outcomes in Korean DCM patients. **Methods:** This single-center, retrospective study included 60 DCM patients who underwent next-generation sequencing (NGS) from November 2017 to September 2024. Patients were classified as genotype-positive (pathogenic/likely pathogenic variants) or genotype-negative (variants of uncertain significance or no pathogenic variants). Composite outcomes included cardiac death, heart failure (HF)-related hospitalizations, ventricular tachycardia and appropriate ICD shocks. **Results:** Of the 60 patients, 15 (25%) were genotype-positive, with TTN (30%) as the most common pathogenic variant, followed by MYBPC3 (6.7%) and others. Over a median follow-up of 665 days, 32 patients (53.3%) experienced adverse outcomes, including 11 (18.3%) cardiac deaths and 13 (21.7%) HF-related hospitalizations. Genotype-positive patients showed markedly reduced event-free survival in Kaplan-Meier analysis (p=0.005) and an increased risk of adverse outcomes (HR 3.13, 95% CI: 1.35-7.28, p=0.008). **Conclusion:** Genotype-positive DCM patients show worse survival outcomes than genotype-negative patients. These findings highlight the role of genetic

testing in risk stratification and personalized management of DCM.

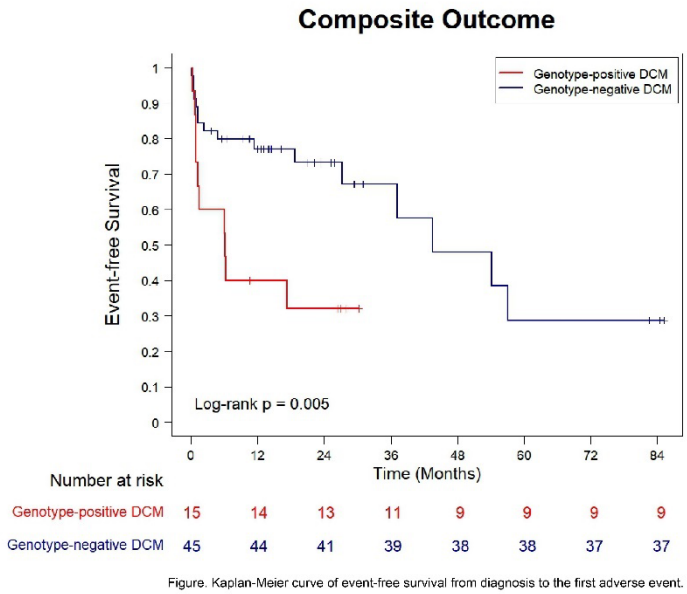


Figure. Kaplan-Meier curve of event-free survival from diagnosis to the first adverse event.

Saturday Flatboard Poster Presentations

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	02
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	MECHANICAL THROMBECTOMY AND INTRAVASCULAR STENTING OF A CASE OF MAY-THURNER SYNDROME COMPLICATED WITH ABNORMAL UTERINE BLEEDING
Author Block:	Ramon Antonio King, Charisse Mendoza-Aldea, Makati Medical Center, Makati City, Philippines
Abstract Body:	**Background:** May-Thurner Syndrome (MTS) is a rare but underdiagnosed condition caused by chronic compression of the left common iliac vein by the overlying right common iliac artery, commonly leading to venous obstruction, stenosis, and left sided deep vein thrombosis (DVT). **Case:** This is a case of a 48-year-old female with history of adenomyosis, previously on chronic oral contraceptive use. The patient experienced 1 week history of abnormal uterine bleeding related to her adenomyosis and was prescribed estradiol. On the following days, she developed swelling and paresthesia of the left foot, which later progressed to the thigh. A CT angiogram of the abdominal aorta revealed chronic compression of the left common iliac vein against the L5 vertebra by the overlying right common iliac artery, consistent with May-Thurner Syndrome, as well as DVT of the left iliac and femoral veins. The patient was found to be severely anemic and was transfused with red blood cells accordingly. **Decision-making:** The therapeutic dilemma of managing left iliac vein compression, DVT, and adenomyosis was discussed with the patient. Hormone-based therapies were avoided due to hypercoagulable risk, and hysterectomy was proposed for long-term management. With consent, endovascular treatment was pursued. She underwent insertion of a retrievable IVC filter, percutaneous transluminal mechanical thrombectomy, venoplasty, and stent placement, effectively addressing the thrombosis and

venous stenosis. The patient was then started on therapeutic anticoagulation and discharged on apixaban 5 mg twice daily and aspirin 80 mg once daily. The patient has then been on regular follow up.

Conclusion: This case highlights the importance of early recognition and multidisciplinary management of MTS, particularly patients with high bleeding risk. Comprehensive management with anticoagulation and endovascular interventions, can restore venous flow, reduce symptoms, and prevent complications.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	03
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	ASSOCIATION OF YEO'S INDEX WITH CLINICAL OUTCOMES IN RHEUMATIC MITRAL STENOSIS
Author Block:	Ryan Leow, Tony Li, Chan Meei Wah, William K. F. Kong, Siew Pang Chan, Kian Keong Poh, Ivandito Kuntjoro, Ching Hui Sia, Tiong Cheng Yeo, National University Heart Centre Singapore, Singapore, Singapore
Abstract Body:	**Background:** Yeo's index, the product of the mitral leaflet separation index and dimensionless index of mitral valve (MV), was recently described to accurately identify severe rheumatic mitral stenosis (MS). We assess the association between Yeo's index and clinical outcomes in patients with rheumatic MS. **Methods:** We studied 297 patients with rheumatic MS. Clinical and echocardiographic data were obtained from the electronic medical record and Yeo's index was measured in all cases. The outcome studied was a composite of all cause death, heart failure (HF) hospitalisation, MV intervention and stroke or transient ischaemic attack. We also performed subgroup analysis of patients without pre-existing atrial fibrillation (AF) to assess for association with new onset AF. **Results:** The median follow up was 6.3 years; 145 patients (48.8%) developed the composite outcome. Yeo's index (p<0.001), mitral valve area (MVA) by pressure half-time (PHT) (p=0.028) and planimetry (p<0.001), age (p=0.016), history of diabetes mellitus (p=0.029), previous HF (p=0.021), left ventricular ejection fraction (p=0.022), and pulmonary artery systolic pressure (p=0.007) were univariately associated with the composite outcome. Yeo's index remained independently associated with the composite outcome in multivariate analysis (p<0.001, HR 0.094, 95% CI 0.260-0.340). This was primarily driven by MV intervention. In a subgroup analysis of patients without

pre-existing AF, Yeo's index was independently associated with new onset AF (p=0.024, HR 0.354, 95% CI 0.143-0.874).
Conclusion: This demonstrated that Yeo's index was independently associated with clinical outcomes in patients with rheumatic MS which was mainly driven by MV intervention.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	04
Topic 1:	Cardiac Arrhythmias
Publishing Title:	ASSESSING THE REPOLARIZATION RESERVE IN PATIENTS WITH CONGENITAL LONG QT SYNDROME AND THEIR FIRST-DEGREE RELATIVES BY STAND-UP TEST
Author Block:	Goutam Kintada, Nitish Naik, AIIMS NEW DELHI, NEW DELHI, India
Abstract Body:	**Background:** LQTS (Long QT syndrome) occurs due to mutations in ion channels. Provocative manoeuvres like stand-up test unmask abnormalities although 12 lead ECG (Electrocardiogram) is normal **Methods:** This is cross sectional observational study enrolling LQTS patients and their first-degree relatives. History, examination, ECG and stand-up test performed. Stand-up test is bedside test assuming standing from supine position with continuous ECG monitoring. QT, QTc measured at baseline, maximal tachycardia and maximal QT stretching. Statistical analysis- Student T-test and Chi-square test. P-value ≤ 0.05 considered significant **Results:** Most patients presented with syncope. On stand-up test, baseline QT&QTc, QT at maximum heart rate, longest QT and QT at maximal QT stretching significantly higher in patients than first-degree relatives. When QT adjusted using Bazzett's formula, there was no difference. When QT at maximum heart rate or maximum QT stretching analysed, 7/22 patients had QT above age wise cut-off and 1 patient had QT above 500ms. While in first-degree relatives, only 1/45 had QT above age wise cut-off and not exceeding 500ms. **Conclusion:** Current study describes clinical features and repolarization reserve of LQTS patients and their first-degree relatives using stand-up test. Although both groups have normal QT and QTc at rest, stand-up test unmasked

increased QT, QTc in LQTS patients.

Parameter	Patients (22) % or Mean +/-SD	First-degree relatives (45) % or Mean +/-SD	P value
Clinical features			
Syncope	17/22 (77.2%)	2/45 (4.4%)	
Aborted sudden cardiac arrest	2/22 (9%)	0	
Seizures	6/22 (27.2%)	1/45 (2.2%)	
Hearing loss	2/22 (9%)	0	
Congenital heart disease	1/22 (4.5%)	0	
Heart block on pacemaker	5/22 (23%)	0	
Intracardiac defibrillator	4/22 (18%)	0	
Post cervical sympathectomy	2/22 (9%)	0	
Stand-up test parameters			
Baseline heart rate (beats/min)	76±13	79±14	0.510
Maximum heart rate (beats/min)	96.7±17	109±16	**0.008**
Baseline QT interval (msec)	405±50	365±39	**0.001**
Baseline QTc interval [Bazett,msec]	452±46	414±38	**0.001**
QT interval at max heart rate (msec)	416±62	379±33	**0.003**
QTc interval at max heart rate [Bazett,msec]	521±53	507±39	0.242
Longest QT interval (msec)	417±63	385±31	**0.008**
QTc longest QT interval [Bazett,msec]	522±53	511±40	0.342
QT during max QT interval stretching (msec)	416±62	382±32	**0.005**
QTc during max QT interval stretching [Bazett,msec]	521±53	510±38	0.311

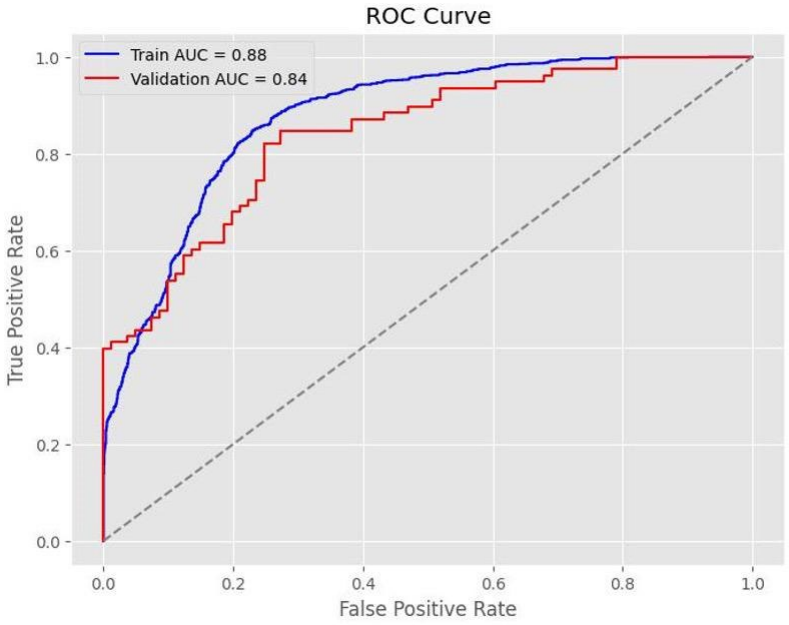
Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	05
Topic 1:	Cardiac Arrhythmias
Publishing Title:	PULSED FIELD ABLATION VERSUS THERMAL ABLATION ON PAROXYSMAL ATRIAL FIBRILLATION A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Pirel Aulia Baravia, Wilbert Huang, Andrea Ivana Allicia Hutabarat, Evelyna Supratno, Chandra William Suhendar, Yumeicho Sachi, Bambang Budi Siswanto, Idaman General Hospital, Banjarbaru, Indonesia, Faculty of Medicine, University of Padjadjaran, Bandung, Indonesia
Abstract Body:	**Background:** Atrial fibrillation (AF) is the most common arrhythmia in clinical setting and is notorious for its progressivity towards a more severe presentation - persistent AF. With current remarkable evidence of catheter ablation on treating AF compared to medical management, we aim to compare the standard care of pulmonary vein isolation namely thermal ablation (comprising both radiofrequency ablation and cryoablation) with pulsed field ablation (PFA) as novel non-thermal energy source to selectively ablate cardiac tissue in patients with paroxysmal atrial fibrillation. **Methods:** We systematically searched studies comparing PFA and thermal ablation to treat paroxysmal atrial fibrillation (PAF) from PubMed, ScienceDirect, and Cochrane Library reported until January 4, 2025 including observational studies and randomized controlled trials that fulfil eligible criteria. Thermal ablation includes both radiofrequency ablation and cryoablation. PAF is defined as AF that terminates spontaneously or with intervention within 7 days of onset. Data were pooled with random-effects or fixed-effects depending on the heterogeneity test. **Results:** Five studies met the eligibility criteria with 738 patients undergone PFA and 1390 patients (radiofrequency ablation 602 patients and cryoablation 788 patients) undergone thermal ablation as treatment for PAF. PFA showed a statistically significant lower recurrence rate compared to

thermal ablation (RR 0.71, 95% CI 0.56-0.88, p=0.002) with similar procedural complication (RR 0.78, 95% CI 0.37-1.65, p=0.51). PFA is not associated with an increasing risk of procedural complication in term of cardiac tamponade (RR 1.84, 95% CI 0.33-10.13, p=0.48) and cerebrovascular accident (RR 1.44, 95% CI 0.36-5.72, p=0.61) compared to thermal ablation.

Conclusion: PFA is associated with a lower recurrence rate with no increasing risk of procedural outcomes compared to thermal ablation, however larger studies are needed in the future.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	06
Topic 1:	Cardiac Arrhythmias
Publishing Title:	HARNESSING MACHINE LEARNING FOR PREDICTING ATRIAL FIBRILLATION FROM NORMAL LOOKING ECG : AN INDIAN STUDY
Author Block:	Gurunath P. Parale, Hrishikesh Parale, Chinmay Parale, SIDESH KUMAR, Spandan cardiac diagnostic centre, Solapur, India, Ashwini rural medical college, Solapur, India
Abstract Body:	**Background:** Deep learning (DL) models can discern ECG reports to identify individuals at high risk for atrial fibrillation (AF). High prevalence of rheumatic heart disease aetiology (42%) with AF in India differs from the west. This study evaluates a DL model of 12-lead ECG reports of normal sinus rhythm and intermittent AF to screen high risk populations for AF. **Methods:** The 12-lead ECG reports of patients with intermittent AF or normal sinus rhythm were classified with a DL model (1963 records for training, 159 for testing) of 1D convoluted neural network (CNN). At 50% threshold, the model was adjusted for hyperparameters, evaluated for performance, and validated to screen individuals with risk factors (diabetes (DM), hypertension (HTN), valvular disorders, ischaemic heart disease (IHD). **Results:** The model generation used data of 1000 individuals with normal sinus rhythm and 1084 individuals with intermittent AF. The ROC curve is represented in Figure 1. The sensitivity and specificity was 90% and 71% (PPV-71% and NPV- 90%) during training and, 85% and 69% (PPV-73%, NPV - 82%) during validation. The model was able to assess individuals at risk of AF: 327/516 in post IHD, 235/502 in HTN and DM; 137/387 in DM and 499/1040 in HTN and 902/1398 in valvular dysfunction. **Conclusion:** The CNN model developed based on the ECG signatures offers 85-90% sensitivity in screening individuals at a risk of developing AF. The

prediction could facilitate early intervention to prevent sudden onset of complications including stroke.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	07
Topic 1:	Cardiac Arrhythmias
Publishing Title:	CATHETER ABLATION VERSUS ANTI-ARRHYTHMIC DRUG THERAPY FOR ATRIAL FIBRILLATION IN END-STAGE RENAL DISEASE
Author Block:	Aravinthan Vignarajah, Yong Shen Teo, Min Choon Tan, Nishanthi Vigneswaramoorthy, Justin Zon-Ern Lee, Cleveland Clinic Fairview Hospital, Cleveland, OH, USA, University of Malaya, Kuala Lumpur, Malaysia

Abstract Body:

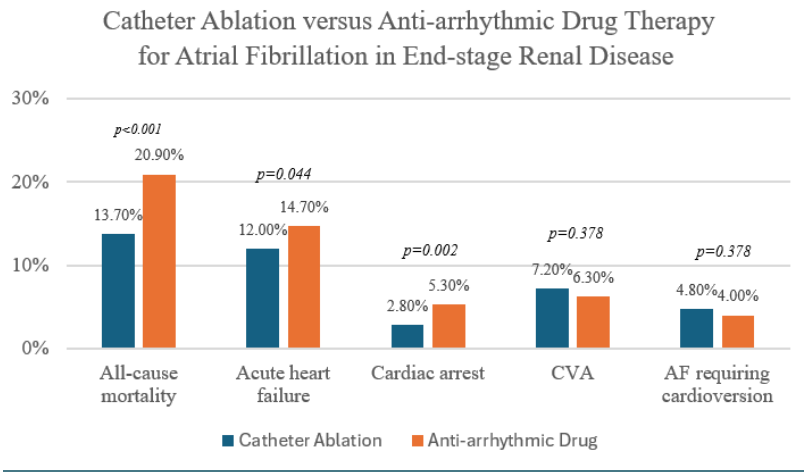
Background: Catheter ablation (CA) has demonstrated improved outcomes compared to antiarrhythmic drug (AAD) therapy in pursuing rhythm control of atrial fibrillation (AF). However, data of CA for AF in patients with end-stage renal disease (ESRD) is limited.

Methods: Using the TriNetX Analytics Research Network, this study included patients aged ≥18 years diagnosed with AF and ESRD between 1/1/2014 and 1/1/2021. Patients were categorized into two groups: those treated with CA and those treated with AAD. Propensity score matching (PSM) was performed. Study outcomes included 3-year all-cause mortality and cardiac adverse events.

Results: A total of 1,247 patients in the CA group and 49,353 patients in the AAD group were included. After PSM, 1,237 patients from each group were analyzed. Patients treated with CA had lower rates of all-cause mortality (OR: 0.600, 95% CI: 0.486-0.743), acute heart failure (OR: 0.788, 95% CI: 0.624-0.994), and cardiac arrest (OR: 0.525, 95% CI: 0.345-0.798). There were no significant differences between the groups in cerebrovascular accidents (OR: 1.152, 95% CI: 0.841-1.578) or AF requiring cardioversion (OR: 1.189, 95% CI: 0.809-1.748).

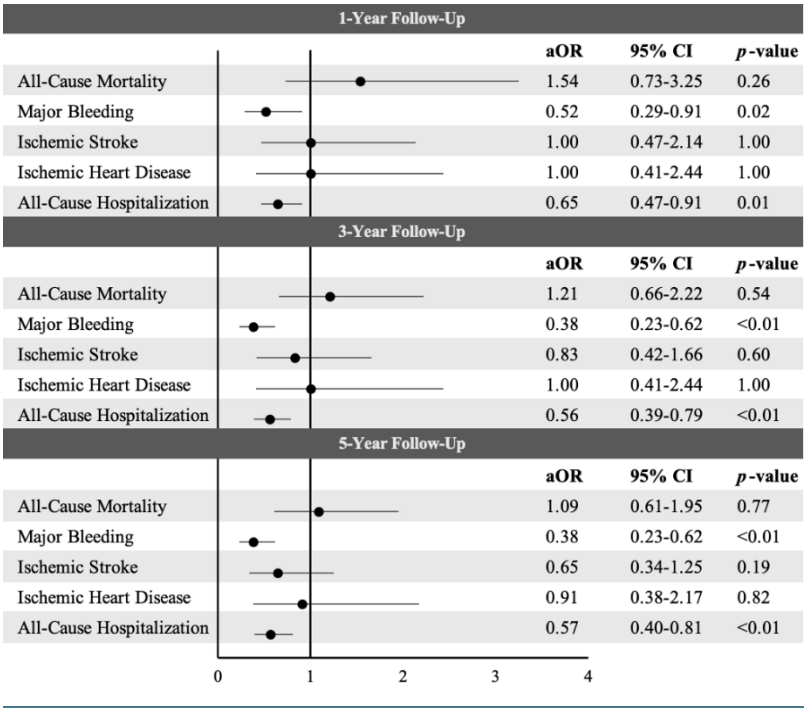
Conclusion: Catheter ablation for AF was associated with reduced risks of all-cause mortality, acute heart failure, and cardiac arrest compared to AAD in

ESRD.


Catheter Ablation versus Anti-arrhythmic Drug Therapy for Atrial Fibrillation in End-stage Renal Disease
30%
20%
10%
0%
p<0.001
20.90%
13.70%
p=0.044
14.70%
12.00%
p=0.002
5.30%
2.80%
p=0.378
7.20%
6.30%
p=0.378
4.80%
4.00%
All-cause mortality
Acute heart failure
Cardiac arrest
CVA
AF requiring cardioversion
Catheter Ablation
Anti-arrhythmic Drug

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	08
Topic 1:	Cardiac Arrhythmias
Publishing Title:	OPTIMAL DURATION OF ANTICOAGULATION IN PREGNANT WOMEN WITH ATRIAL FIBRILLATION: A PROPENSITY SCORE-MATCHED ANALYSIS
Author Block:	Tze Ern Ong, Desmond How Chiat Tan, Yong Hao Yeo, Aravinthan Vignarajah, Justin Z. Lee, Dan Sorajja, Nagib T. Chalfoun, Corewell Health William Beaumont University Hospital, Detroit, MI, USA
Abstract Body:	**Background:** No recent large-scale studies have guided the optimal duration of anticoagulant therapy in pregnant women with atrial fibrillation (AF). **Methods:** We utilized the TriNetX network to identify pregnant women (≥18 years old) with AF from 2019 to 2023. Patients were categorized by anticoagulation therapy duration (<3 months vs. >3 months) and followed for one year, three years and five years. Primary outcomes included all-cause mortality, major bleeding, ischemic stroke, ischemic heart disease, and all-cause hospitalization. **Results:** After propensity score matching, 556 pregnant women with AF were identified, with 278 in each cohort receiving anticoagulation therapy for <3 months or >3 months. Anticoagulation for <3 months was associated with significantly lower odds of major bleeding at 1 year (aOR 0.52, 95% CI 0.29-0.91, p=0.02), 3 years (aOR 0.38, 95% CI 0.23-0.62, p<0.01), and 5 years (aOR 0.38, 95% CI 0.23-0.62, p<0.01). Similarly, it was linked to reduced all-cause hospitalization at 1 year (aOR 0.65, 95% CI 0.47-0.91, p=0.01), 3 years (aOR 0.56, 95% CI 0.39-0.79, p<0.01), and 5 years (aOR 0.57, 95% CI 0.40-0.81, p<0.01). No significant differences were observed between the groups in all-cause mortality, ischemic stroke, or ischemic heart disease at 1-, 3-, and 5-year follow-ups. **Conclusion:** Anticoagulation therapy for <3 months in pregnant women with

AF was associated with significantly lower odds of major bleeding and all-cause hospitalization across 1-, 3-, and 5-year follow-ups.



1-Year Follow-Up	aOR	95% CI	*p*-value
All-Cause Mortality	1.54	0.73-3.25	0.26
Major Bleeding	0.52	0.29-0.91	0.02
Ischemic Stroke	1.00	0.47-2.14	1.00
Ischemic Heart Disease	1.00	0.41-2.44	1.00
All-Cause Hospitalization	0.65	0.47-0.91	0.01
3-Year Follow-Up	**aOR**	**95% CI**	***p*-value**
All-Cause Mortality	1.21	0.66-2.22	0.54
Major Bleeding	0.38	0.23-0.62	<0.01
Ischemic Stroke	0.83	0.42-1.66	0.60
Ischemic Heart Disease	1.00	0.41-2.44	1.00
All-Cause Hospitalization	0.56	0.39-0.79	<0.01
5-Year Follow-Up	**aOR**	**95% CI**	***p*-value**
All-Cause Mortality	1.09	0.61-1.95	0.77
Major Bleeding	0.38	0.23-0.62	<0.01
Ischemic Stroke	0.65	0.34-1.25	0.19
Ischemic Heart Disease	0.91	0.38-2.17	0.82
All-Cause Hospitalization	0.57	0.40-0.81	<0.01

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	09
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	ASSOCIATION OF HEMOGLOBIN TO RED BLOOD CELL DISTRIBUTION WIDTH RATIO WITH MORTALITY AFTER CORONARY ARTERY BYPASS GRAFTING
Author Block:	Bufan Zhang, Naishi Wu, Tianjin Medical University General Hospital, Tianjin, China
Abstract Body:	**Background:** This study aims to explore the association between hemoglobin to red blood cell distribution width ratio (HRR) with mortality in patients after coronary artery bypass grafting (CABG). **Methods:** Data on patients who underwent CABG from January 1, 2021, to July 31, 2022, were retrospectively collected. The locally weighted scatter plot smoothing method was utilized to display the crude association between HRR and in-hospital mortality. The receiver operating characteristic curve was used to show the discrimination. The cut-off value (8.0882) of HRR was calculated using the Youden index method. The primary outcome was in-hospital mortality. **Results:** In total, 1,258 patients were included. The locally weighted scatter plot smoothing curve showed an approximate negative linear relationship between HRR and in-hospital mortality. In the multivariable logistic regression model, HRR was an independent predictor (odds ratio [OR] = 0.74, 95% confidence interval [CI] 0.58-0.95, p = 0.019) for in-hospital mortality after CABG. The receiver operating characteristic curve showed that HRR displayed great discrimination. The cut-off value (8.0882) of HRR was calculated for further analysis, and groups were further divided into the high HRR group (≥ 8.0882) and the low HRR group (< 8.0882). In the multivariable logistic regression model, high HRR (≥ 8.0882) correlated with a reduced risk of in-hospital mortality (OR = 0.26, 95% CI 0.13-0.53, p < 0.001) and one-year

mortality (OR = 0.27, 95% CI 0.14-0.51, $p < 0.001$) after adjusting for all included covariates. Besides, the Kaplan-Meier survival curve displayed that patients with high HRR showed a better one-year survival rate than those with low HRR ($p < 0.001$).

Conclusion: Preoperative HRR is an independent predictor for in-hospital mortality and one-year mortality, which can be utilized to assess the prognosis of patients and further provide guidance for the treatment in patients following CABG.

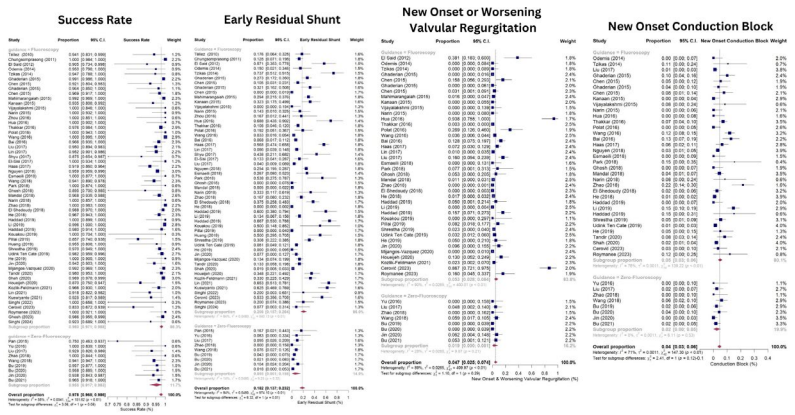
Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	10
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	ASSOCIATION BETWEEN BODY MASS INDEX AND TRIGLYCERIDE-GLUCOSE INDEX AND IN-HOSPITAL ADVERSE OUTCOMES IN PATIENTS WITH DIABETES UNDERGOING CORONARY ARTERY BYPASS GRAFTING
Author Block:	Hongzhao You, Meng Chen, Xiaojue LI, Guangwei LI, Zhe Zheng, Yanyan Chen, Fuwai Hospital, Chinese Academy of Medical Sciences, Beijing, China
Abstract Body:	**Background:** Both obesity and insulin resistance has been linked to the progression and prognosis of diabetes-related complications, especially in cardiovascular diseases. Nevertheless, the relationship between the BMI and Triglyceride-glucose index (TyG) remains unexplored in diabetic patients undergoing coronary artery bypass grafting (CABG) . **Methods:** This study enrolled 3213 diabetic patients undergoing CABG at Fuwai Hospital and divided into three groups by preoperative BMI (<24, 24-28, and >28 kg/m^2). Subgroup analysis was conducted to examine whether the TyG's association with adverse events varied across different subgroups. The primary endpoint encompassed a composite endpoint incorporating in-hospital all-cause mortality and major cardiovascular complications. The secondary endpoint was defined as major cardiovascular complications including acute myocardial infarction, stroke and acute kidney injury. **Results:** A total of 246 (7.6%) patients met the composite endpoint. Patients with a BMI<24 kg/m^2 had the highest rates of in-hospital cardiovascular endpoints (10.1% vs 6.7% vs 6.8%t, P=0.007), all-cause mortality (2.1% vs 1.0% vs 0.5%, P=0.006), and major complications (9.5% vs 6.5% vs 6.6%, P=0.002) , compared with other two subgroups. Moreover, BMI<24 kg/m^2 is an independent risk factor of major complications (OR=1.48, 95%CI: 1.09-2.02, P=0.013) and composite cardiovascular events (OR=1.53, 95 %CI: 1.12-2.07, P=0.007), after adjusted established risk factors (age, sex, BMI, smoking, low

density lipoprotein cholesterol, chronic renal failure, congestive heart failure, stroke, previous myocardial infarction and peripheral vascular diseases). In subgroup analysis, the highest tertile of TyG (>9.3) in patients with BMI>28kg/m^2 was associated with both major complications (OR=3.48, 95% CI: 1.39-8.72, P=0.008) and composite cardiovascular events (OR=3.45, 95% CI: 1.38-8.64, P=0.008).

Conclusion: In diabetic patients undergoing CABG, BMI< 24 kg/$m^2$was an independent risk factor of in-hospital adverse events. In obese patients (BMI > 28 kg/m2) , a higher triglyceride-glucose (TyG) index was significantly associated with in-hospital adverse events.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	11
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	COMPARATIVE EFFICACY AND SAFETY OF ZERO-FLUOROSCOPY AND STANDARD TRANSCATHETER VSD CLOSURE: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Zuhair Alkatiri, Muhammad Dzaky Erlangga Mumtaz, Muhammad Hatta Hakim, Ramy Iftikhar Mulyana, Rizqi Indirsyah Faiq, Muhammad Bimo Ramadhan, Faculty of Medicine, Universitas Indonesia, Jakarta, Indonesia
Abstract Body:	**Background:** The zero-fluoroscopy (ZF) approach for transcatheter ventricular septal defect (VSD) closure eliminates radiation exposure by relying solely on echocardiography, which is especially beneficial for infants and children, where reducing radiation is critical. However, whether its success rate and safety match the standard transcatheter approach remains a question **Methods:** A systematic review and meta-analysis were conducted using data from PubMed, ClinicalKey, Scopus, Nature, ProQuest, and Cochrane. The review process adhered to the PICO framework and PRISMA guidelines, with 95% CI used in the analysis. Meta-analysis calculations were performed using RStudio. **Results:** A total of 54 studies involving 4,996 patients (mean age 11.11 years) were included, with 9 studies focusing on the ZF approach. The success rate was 0.96 [0.92-0.98] for the ZF group and 0.98 [0.97-0.99] for the Fluoroscopy group, showing non-inferiority ($p = 0.08$). The ZF group had a significantly lower incidence of early residual shunt (0.06 [0.00-0.16] vs. 0.21 [0.16-0.26], $p < 0.05$). Incidences of new-onset conduction block ($p = 0.12$), procedure-related arrhythmias ($p = 0.29$), and valvular regurgitation were not significantly different between groups. **Conclusion:** The success rate and most complications associated with the

Zero-Fluoroscopy approach for transcatheter VSD closure are comparable to the standard fluoroscopy-guided method, demonstrating non-inferiority.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	12
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	A STITCH IN TIME - A RARE CASE OF A RAPIDLY PROGRESSIVE GIANT RIGHT CORONARY ARTERY PSEUDOANEURYSM FOLLOWING STENT FRACTURE
Author Block:	Ujjwala Tulluri, Tilak Suvarna, Ramakanta Panda, Santosh Dora, Sunil Vanzara, Pradyot Rath, Manoj Chauhan, Rishabh Kapoor, Asian Heart Institute and Research Centre, Mumbai, India

Abstract Body:

Background: Drug-eluting stents (DES) have revolutionized cardiology, but coronary artery pseudoaneurysm due to stent fractures remains a rare complication. The therapeutic strategy for such cases is unclear due to its low incidence and unclear pathophysiology.

Case: A 59-year-old lady presented with persistent upper back and shoulder pain, following a DES implantation 42 days prior. Reperformed coronary angiography revealed a large ostioproximal right coronary artery (RCA) aneurysm (18 x 10 mm). After further evaluations, including a CT angiogram, a large pseudoaneurysm (24 x 23 x 22 mm) with stent fracture was found in the RCA, compressing the right atrium (RA).

Decision-making: Surgical repair was advised due to the aneurysm's size and rapid growth, which made other interventions like stent implantation or coil

embolization unsuitable. Intraoperative transeosophageal echocardiography revealed a 5 x 5 cm mass compressing the RA. After surgical excision of the pseudoaneurysm, the marsupialized tissue yielded Pseudomonas aeruginosa. Currently, there is no structured guideline for management of a coronary artery pseudoaneurysm and treatment is largely individualised. **Conclusion:** In our case, the stent fracture likely resulted from mechanical stress, overlapping, and high post-dilatation pressures. The pseudoaneurysm possibly resulting from vascular wall rupture, was further accelerated by infection. We report a successfully treated giant pseudoaneurysm in the RCA with stent fracture.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	13
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	CHALLENGING VASCULAR COMPLICATION IN PCI: INJURY TO AN ABERRANT ARTERY
Author Block:	Avishkar Agrawal, Gautam Sharma, All India Insititute of Medical Sciences, New Delhi, India

Abstract Body:

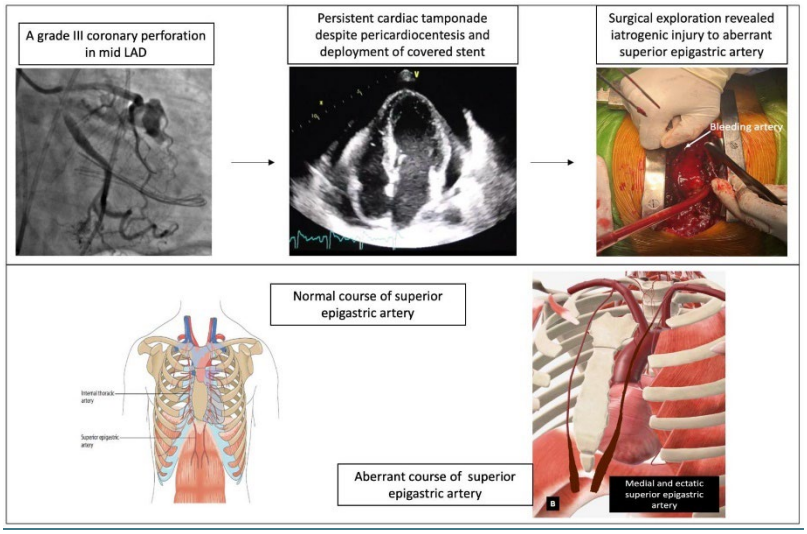
Background: Pericardiocentesis is a life-saving procedure for cardiac tamponade, but even in experienced hands, rare complications like vascular injuries can occur. This case presents a unique instance of injury to an aberrant artery during management of PCI-induced tamponade, underscoring the importance of anatomical awareness.

Case: A 75-year-old woman with exertional angina underwent PCI for significant LAD and LCX lesions. Post-stenting, the patient developed cardiac tamponade due to a Grade III perforation in the mid-LAD, resulting in hemodynamic collapse.

Decision-making: Emergency subxiphoid pericardiocentesis transiently stabilized the patient. A covered stent was deployed to seal the coronary perforation, confirmed by angiography. Despite these measures, persistent rapidly accumulating pericardial hemorrhage (>300 mL/hour) suggested an alternative source of bleeding. Surgical exploration identified an aberrant, dilated superior epigastric artery as the culprit. The artery was surgically ligated, leading to immediate stabilization. The patient recovered well and was discharged in stable condition.

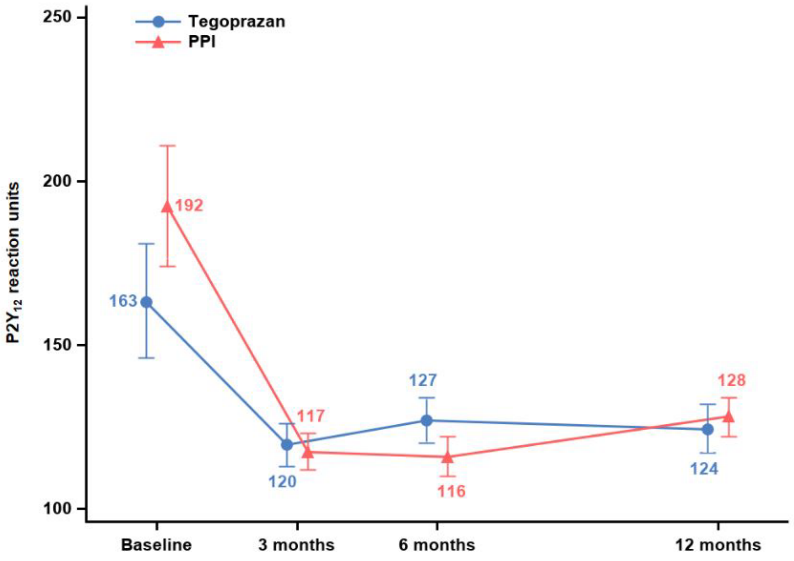
Conclusion: This case highlights the potential for rare vascular complications during pericardiocentesis. Anatomical awareness, imaging guidance, and prompt recognition of persistent bleeding are critical for preventing and managing such life-threatening events. Early surgical intervention can

significantly improve patient outcomes in challenging scenarios.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	14
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	EFFECT OF TEGOPRAZAN ON TEMPORAL VARIABILITY OF PLATELET REACTIVITY IN PATIENTS TREATED WITH P2Y12 INHIBITORS AFTER CORONARY STENTING
Author Block:	Oh-Hyun Lee, Ji Woong Roh, Yongcheol Kim, Eui Im, Deok-Kyu Cho, Yongin Severance Hospital, yongin, South Korea
Abstract Body:	**Background:** Data on the interactions between $P2Y_{12}$ inhibitors and tegoprazan are limited. We compared the effects of tegoprazan and proton-pump inhibitors (PPIs) on platelet reactivity. **Methods:** Using database data from March 2020 to January 2023, we evaluated 499 patients who were taking either tegoprazan (n = 214) or PPIs (n = 285) combined with dual antiplatelet therapy, including aspirin and $P2Y_{12}$ inhibitors, after percutaneous coronary intervention. Platelet reactivity was assessed using VerifyNow $P2Y_{12}$ assays. **Results:** $P2Y_{12}$ reaction unit (PRU) values at 3 (120 ± 6 vs. 117 ± 5, p = 0.782), 6 (127 ± 7 vs. 116 ± 6, p = 0.219), and 12 months (124 ± 8 vs. 128 ± 6, p = 0.688) were similar between groups. The prevalence of high on-treatment platelet reactivity, defined as ≥ 253 PRU, was also similar between the groups at 3 (6.9% vs. 6.4%, p = 0.843), 6 (7.0% vs. 4.9%, p = 0.446), and 12 months (4.4% vs. 5.5%, p = 0.780). PRU values at 12 months revealed no significant differences between the two groups, even when patients were stratified by clopidogrel, prasugrel, and ticagrelor use (tegoprazan vs. PPI; clopidogrel, 155 ± 10 vs. 164 ± 7, p = 0.448; prasugrel, 102 ± 22 vs. 121 ± 13, p = 0.461; ticagrelor, 81 ± 12 vs. 73 ± 9, p = 0.598). **Conclusion:** PRU values were similar in patients using tegoprazan or PPIs up to 12-months post-PCI, suggesting that tegoprazan may offer a safer

alternative for gastroprotection in these patients.



PRUs	Tegoprazan (n=214)	PPI (n=285)	Mean difference (95% CI)	p value
Baseline	163 ± 17	192 ± 19	-29 (-79, 21)	0.251
3 months	120 ± 6	117 ± 5	2 (-14, 18)	0.782
6 months	127 ± 7	116 ± 6	11 (-7, 29)	0.219
12 months	124 ± 8	128 ± 6	-4 (-23, 15)	0.688

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	16
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	IDENTIFYING RESPONDERS OF INTRAMYOCARDIAL STEM CELL (IMSC) TRANSPLANTATION DURING CABG IN PATIENTS WITH LOW EJECTION FRACTION: INCREASING COST EFFECTIVENESS
Author Block:	Tri Wisesa Soetisna, Ahmad Muslim Hidayat Thamrin, Teuku Heriansyah, Anwar Santoso, Harapan Kita National Cardiovascular Center Hospital, Jakarta, Indonesia, Departement of Cardiology and Vascular Medicine, Faculty of Medicine Universitas Syiah Kuala, Banda Aceh, Indonesia
Abstract Body:	**Background:** The benefits of IMSC transplantation during CABG surgery have been extensively documented. Our recent meta-analysis demonstrates the superiority of combining IMSC with CABG over CABG alone in enhancing cardiac function, although it also reveals variability in patient responses. We conducted an analysis of our RCT data to identify factors influencing patient responses. **Methods:** Thirty patients with ischemic heart disease (IHD) and LVEF of less than 35% were randomized to receive either CABG with IMSC transplantation (utilizing CD133+ stem cells) or CABG alone. Cardiac function was assessed via cardiac MRI after six months. Patients in the IMSC group were classified as responders if they achieved a minimum EF improvement of 5% on evaluation. A comprehensive analysis of the characteristics distinguishing responders from non-responders was performed. **Results:** At six months, improvements in LVEF, wall motion score index, scar size proportion, and 6-minute walking test results were significantly greater in the IMSC group ($p < 0.05$). Among the 13 patients in the IMSC group, 7 were classified as responders and 6 as non-responders. Our analysis indicates that, contrary to the common belief that higher baseline LVEF correlates with better outcomes, lower baseline LVESV and LVEDV are more significant

predictors of responsiveness to IMSC transplantation ($p = 0.462$ for LVEF; $p = 0.036$ for LVESV; $p = 0.012$ for LVEDV). LV volumes are likely influenced by the extent of viable myocardial cells, which determines the myocardial regenerative capacity. Additional factors influencing IMSC response, including body weight, circulating angiogenic factors, kidney function, and bone marrow stem cell levels, are currently under investigation.

Conclusion: The myocardial regenerative capacity can be reflected in left ventricular volumes, which are critical in predicting a patient's response to IMSC transplantation. Lower LVESV and LVEDV suggest a higher presence of viable myocardial cells, thus enhancing the patient's response. While ongoing studies are necessary, it is essential to consider other factors to maximize the potential benefits of IMSC transplantation in patients with IHD.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	17
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	ASSOCIATION BETWEEN TRIGLYCERIDE TO HIGH DENSITY LIPOPROTEIN RATIO AND IN-HOSPITAL MORTALITY IN ACUTE MYOCARDIAL INFARCTION PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION
Author Block:	Aida Yulia Amany, Inne Farissa, Lourensia Brigita Praha, Safir Sungkar, Faculty of Medicine, Diponegoro University – Dr. Kariadi Central General Hospital Semarang, Indones, Semarang, Indonesia
Abstract Body:	**Background:** The triglyceride to high-density lipoprotein (TG/HDL) ratio is an important marker for predicting cardiovascular risk. In patients with acute myocardial infarct (AMI) undergoing percutaneous coronary intervention (PCI), identifying predictors of in-hospital mortality is critical. While the TG/HDL ratio has been linked to long-term outcomes, its role in predicting short-term in-hospital mortality remains unclear. This study seeks to explore the relationship between the TG/HDL ratio and in-hospital mortality in AMI patients treated with PCI. **Methods:** This study aimed to evaluate the association between the TG/HDL ratio and in-hospital mortality in AMI patients undergoing PCI. A total of 407 AMI patients, including 354 with STEMI (87.0%) and 40 with NSTEMI (9.8%), were analyzed. Patients were divided into survivors (n=348) and deceased (n=59). Clinical, demographic, and procedural data were collected. The TG/HDL ratio was assessed as a continuous variable and using a cutoff of >3 to define elevated levels. Statistical analysis and logistic regression were conducted to explore its association with mortality. **Results:** The TG/HDL ratio, as a continuous variable, was not significantly associated with in-hospital mortality (4.71 ± 2.86 in deceased vs. 4.20 ± 3.88 in survivors, p=0.185). However, using a cutoff of >3, it showed a significant association. Among deceased patients, 67.8% had a TG/HDL ratio >3

compared to 53.7% of survivors (p=0.046), with an odds ratio of 0.552 (95% CI: 0.307-0.991). Deceased patients also had significantly lower HDL levels (33.22 ± 9.37 vs. 36.84 ± 8.83 mg/dL, p=0.008) and total cholesterol (169.07 ± 44.85 vs. 179.69 ± 43.82 mg/dL, p=0.016). Triglycerides and LDL levels showed no significant differences.

Conclusion: The TG/HDL ratio, particularly when using a cutoff of >3, is significantly associated with in-hospital mortality in AMI patients undergoing PCI. These findings highlight the potential of the TG/HDL ratio as a valuable marker for identifying high-risk patients, emphasizing its clinical relevance in the context of lipid and metabolic disturbances.

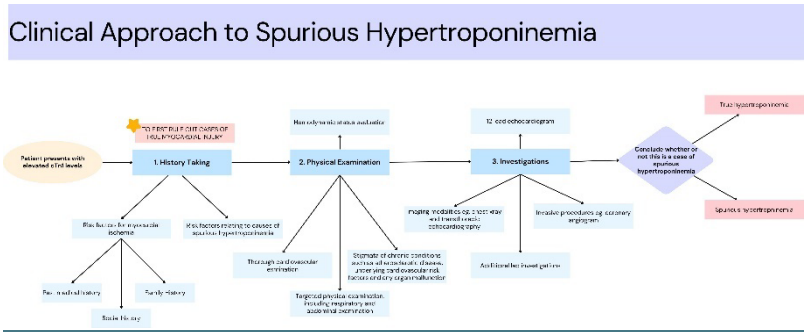
Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	18
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	PROGNOSTIC IMPACT OF SODIUM-GLUCOSE COTRANSPORTER 2 INHIBITORS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AND CORONARY ISCHEMIA: A RETROSPECTIVE COHORT STUDY
Author Block:	Haochen Xuan, Kai-Hang Yiu, The University of Hong Kong-Shenzhen Hospital, Shenzhen, China, Queen Mary Hospital, Hong Kong, China
Abstract Body:	**Background:** Type 2 diabetes mellitus (T2DM) patients with coronary ischemia face an exceptionally elevated risk, and the achievement of complete revascularization (CR) within this population is significantly arduous. The impact of Sodium-glucose cotransporter 2 (SGLT2) inhibitors on the prognosis of individuals with T2DM and residual coronary ischemia remains to be conclusively determined. **Methods:** T2DM Patients with coronary ischemia based on coronary angiography and retrospective coronary angiography-derived fractional flow reserve (caFFR) analysis between 2014 and 2016 were included. The successful revascularization of all major coronary artery branches experiencing functional ischemia was defined as CR. Patients were divided into two groups based on whether they had been prescribed with SGLT2 inhibitors. The primary study endpoint was major adverse cardiac events (MACE), while all-cause mortality and the individual components of MACE served as secondary endpoints. **Results:** A total of 671 T2DM patients with coronary ischemia were identified. Among them, 484 (72.1%) achieved CR, while 206 (30.7%) were prescribed with SGLT2 inhibitors after the operation. During a mean 36-month follow-up, 100 MACE and 89 all-cause mortality were recorded. SGLT2 inhibitor users demonstrated lower rates of MACE (8.3% vs. 17.8%; P=0.002) and all-cause mortality (6.3% vs. 16.3%; P<0.001) compared to non-users. Subgroup

analysis indicated that SGLT2 inhibitors were equally beneficial in both the CR and ICR groups ($P_{interaction}$=0.804 for MACE and 0.730 for all-cause mortality). After adjusting for confounding factors in multivariable Cox analysis, the association between SGLT2 inhibitors and reduced MACE incidence remained consistent both in the CR and ICR subgroups (HR, 0.498; 95%CI, 0.246 - 0.938; P=0.040 and HR, 0.341; 95%CI, 0.123 - 0.805; P=0.023, respectively).

Conclusion: SGLT2 inhibitors were found to be associated with a reduced risk of 3-year MACE and all-cause mortality in T2DM patients with coronary ischemia, regardless of whether CR was achieved.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	19
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	SPURIOUS HYPERTROPONINAEMIA: A NARRATIVE REVIEW AND PRACTICAL APPROACH TO A RARE CLINICAL ENTITY FOR FRONTLINE CLINICIANS
Author Block:	XIN YAN TAN, MAGDELEINE CHEN YING, ISAAC KAH SIANG NG, DESMOND TEO, LIZHEN ONG, SHIR LYNN LIM, NATIONAL UNIVERSITY OF SINGAPORE YONG LOO LIN SCHOOL OF MEDICINE, SINGAPORE, Singapore, NATIONAL UNIVERSITY HOSPITAL SINGAPORE, SINGAPORE, Singapore
Abstract Body:	**Background:** Spurious hypertroponinaemia is a lesser known cause of elevated troponin levels. We reviewed causes of and proposed a simplified approach to suspected cases of spurious hypertroponinaemia. **Methods:** We searched the PubMed database till 26/10/24 for relevant articles with the terms: “troponin”, “hypertroponinaemia” or “hypertroponinemia” (title/abstract) and “spurious” or “false” (title/abstract). We excluded articles without full text availability, not in English, and those that reported cases of supposedly falsely elevated troponins in context of significant clinical conditions that could lead to myocardial injury. **Results:** Of 287 articles, 91 related to causes of spurious hypertroponinaemia were chosen.We narrowed down the causes of spurious hypertroponinaemia to three main categories: 1) Pre analytical (sample collection/handling) such as fibrin clot formation, hemolysis and lipaemia, 2) Analytical (sample processing) such as macrotroponins, heterophile antibodies, rheumatoid factor, signal generating alkaline phosphatase, myopathy, analytic platform malfunction, and 3) Post-analytical (assay reporting) such as differing interpretations of the 99th percentile. We proposed a practical approach to identifying and evaluating suspected spurious hypertroponinaemia (Figure). **Conclusion:** Spurious hypertroponinaemia remains an important cause of

elevated troponin levels. A systematic yet practical approach could aid in the management of this clinical entity.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	20
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	SUCCESSFUL APPLICATION OF IMMUNOADSORPTION THERAPY IN A PATIENT WITH DILATED CARDIOMYOPATHY AND END-STAGE HEART FAILURE: A CASE REPORT
Author Block:	Rendan Zhang, Ying Liu, Lvwen Ning, Lu Kong, Xiehui Chen, Shenzhen Longhua District Central Hospital, Shenzhen, China
Abstract Body:	**Background:** Dilated cardiomyopathy (DCM) is a characteristic cardiac disease marked by impaired myocardial contractility and ventricular dilation, recognized as a significant cause of heart failure. In recent years, Immunoadsorption (IA) therapy has shown potential in removing pathogenic antibodies, but more clinical cases are needed to support its effectiveness in patients with end-stage heart failure. **Case:** The patient experienced chest tightness and dyspnea nine years ago during the peripartum period. No history of hypertension or type 2 diabetes or coronary artery disease. An initial examination at an external hospital on Aug 27, 2024, showed elevated pro-BNP levels (4454 mmol/L), and echocardiography revealed a left ventricular ejection fraction (LVEF) of 22% (minimum recorded LVEF 11%), enlarged left atrium (38 mm) and left ventricle (77 mm), leading to a diagnosis of DCM. She visited our hospital due to dyspnea on Aug 30, 2024. Lung sounds were reduced bilaterally. Cardiac examination showed an enlarged heart with an irregular rhythm and a rate of 78 beats per minute, occasional premature beats, and a grade 2/6 systolic blowing murmur at the mitral area. There was no edema in the lower extremities. Pro-BNP levels were 4454 mmol/L. The Electrocardiogram findings indicate intraventricular conduction block, poor R-wave progression, frequent ventricular premature beats, and short episodes of ventricular

tachycardia. Cardiac MRI show EF of 24%.

Decision-making: Two sessions of IA therapy (on 2024-09-09 and 2024-09-11), followed by high-dose immunoglobulin were given to removes pathogenic autoantibodies. After treatment, heart failure symptoms were significantly improved, with decreased BNP levels (2138 mmol/L on 2024-09-15 and 2109 mmol/L on 2024-10-15) and increased LVEF (28% on 2024-09-14 and 29.2% on 2024-10-15 by Echocardiogram), demonstrating that IA is effective for DCM patients with end-stage heart failure.

Conclusion: This case underscores the potential application of IA therapy in refractory DCM. Limitations of this case include the single-patient observation and the short follow-up period.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	21
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	HEMOGLOBIN-TO-RED BLOOD CELL DISTRIBUTION WIDTH RATIO AS A NOVEL PREDICTOR OF CLINICAL OUTCOME IN PATIENTS WITH LEFT VENTRICULAR THROMBUS
Author Block:	Aloysius Leow, Christopher Junyan Low, Fang Qin Goh, Benjamin Tan, leonard yeo, William K. F. Kong, Kian Keong Poh, Raymond Ching-Chiew Wong, Ping Chai, Tiong Cheng Yeo, Mark Chan, Ching Hui Sia, National University Heart Centre Singapore, Singapore, Singapore, National University Health System, Singapore, Singapore
Abstract Body:	**Background:** Left ventricular thrombus (LVT) is a common complication seen in post-acute myocardial infarction or heart failure patients, arising due to a confluence of factors from the Virchow's triad, and potentially linked to an inflammatory state. Low hemoglobin-to-red blood cell distribution width ratio (Hb/RDW) has recently been proposed as a novel marker of inflammation, hence this study aimed to evaluate its prognostic utility in the setting of LVT. **Methods:** This was a retrospective cohort study involving 535 patients diagnosed with LVT on echocardiography at a tertiary medical centre from March 2011 to January 2021. A Hb/RDW cut-off of 0.92 was derived via receiver operating characteristic analysis for all-cause mortality and was used to stratify LVT patients into two groups for analysis. **Results:** Out of 535 patients with LVT, 171 (32.0%) had low Hb/RDW ratio of ≤0.92, and were older (66.8 vs. 56.7 years old, $p < 0.001$), more were female ($p < 0.001$), had greater co-morbidities burden, but fewer received goal directed medical therapy (GDMT) ($p < 0.001$) and anticoagulation ($p < 0.001$) than those with a high Hb/RDW ratio. On multivariable Cox regression analyses, a low Hb/RDW ratio of ≤0.92 was an independent predictor of the all-

cause mortality (aHR 1.41, 95% CI 1.02 - 1.94, p = 0.041), after adjusting for age, female sex, co-morbidities, LVEF, absence of anticoagulation, GDMT, or LVT resolution.

Conclusion: Hb/RDW ratio was an independent prognostic marker for all-cause mortality in patients with LVT.

Table 1. Cox proportional hazards regression analysis for predictors of all-cause mortality in LVT patients

	Univariate Analysis			Multivariable Analysis	
Variables	**N**	**HR (95% CI)**	***p*-value**	**aHR (95% CI)**	***p*-value**
Age (per year)	535	1.05 (1.04 to 1.06)	**<0.001**	**1.02 (1.01 to 1.03)**	**<0.001**
Female sex	535	2.08 (1.54 to 2.82)	**<0.001**	1.10 (0.79 to 1.54)	0.567
Hypertension	535	1.41 (1.09 to 1.83)	**0.008**	0.80 (0.59 to 1.07)	0.130
Diabetes mellitus	535	1.56 (1.21 to 2.01)	**<0.001**	1.16 (0.88 to 1.54)	0.289
Ischaemic heart disease	535	1.51 (1.17 to 1.95)	**0.002**	1.28 (0.98 to 1.68)	0.069
Chronic kidney disease	535	2.33 (1.73 to 3.14)	**<0.001**	**1.65 (1.18 to 2.30)**	**0.005**
Malignancy	535	2.30 (1.52 to 3.49)	**<0.001**	1.28 (0.83 to 1.98)	0.272
LVEF (per %)	535	0.96 (0.95 to 0.98)	**<0.001**	**0.97 (0.95 to 0.98)**	**<0.001**
Hb/RDW ≤0.92 (vs. >0.92)	535	3.11 (2.31 to 4.17)	**<0.001**	**1.41 (1.02 to 1.94)**	**0.041**
0 or 1 GDMT (vs. ≥2 GDMT)	535	2.27 (1.76 to 2.92)	**<0.001**	**1.44 (1.09 to 1.91)**	**0.011**
No anticoagulation	535	12.1 (8.98 to 16.4)	**<0.001**	**5.11 (3.46 to 7.55)**	**<0.001**
No LVT resolution	535	5.47 (4.21 to 7.12)	**<0.001**	**2.86 (2.08 to 3.93)**	**<0.001**

Abbreviations: GDMT – goal directed medical therapy; LVEF – left ventricular ejection fraction; LVT – left ventricular thrombus

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	22
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EFFICACY OF ANGIOTENSIN RECEPTOR/NEPRILYSIN INHIBITOR IN HIGH-RISK PATIENTS FOLLOWING ACUTE MYOCARDIAL INFARCTION-A SYSTEMIC REVIEW AND META-ANALYSIS
Author Block:	QUYNH NGUYEN, Chien-Yi Hsu, Vu Tu Vy, Taipei Medical University, Taipei, Taiwan
Abstract Body:	**Background:** Angiotensin receptor-neprilysin inhibitor (ARNI) has been pivotal in managing chronic heart failure with reduced ejection fraction. However, the evidence on the benefits of ARNi in high-risk patients who experience complications from acute myocardial infarction (AMI) is still uncertain. This study aimed to examine the effectiveness and safety of early ARNi administration in patients who have heart failure (HF) or cardiac structural abnormalities due to AMI **Methods:** We systematically searched 5 databases: PubMed, Embase, Web of Science, Cochrane Library, and Scopus for studies describing the outcomes of early ARNI administration in patients with complications resulting from AMI. All meta-analyses and plots were performed using the random effects model by RevMan 5.2 (The Cochrane Collaboration, The Nordic Cochrane Centre, Copenhagen, Denmark) **Results:** 13 studies (9 randomized controlled trials, which include 1 ECHO substudy and 4 retrospective studies) with a total of 7,514 patients were included. The median follow-up is 6 months. Our synthesis showed a greater improvement in left ventricular ejection fraction (LVEF) after 6 months and NT-proBNP levels in the ARNI group compared to the conventional group with a mean difference of 3% (95% CI: 1.88-4.04) and 338 pg/ml (95% CI: 140-535), respectively. However, in the short-term follow-up (3 months), the

change of LVEF in both groups is not different. In secondary outcomes, patients treated early with ARNI exhibited a lower risk of HF hospitalization with a risk ratio (RR) of 0.48 (p = 0.0001), a similar rate of renal impairment (RR 0.99, p = 0.22) but a higher rate of symptomatic hypotension with a RR of 1.37 (p = 0.003) compared to the conventional group

Conclusion: This meta-analysis provided insights into the efficacy of administering ARNI early to high-risk patients facing complications after AMI by improving LVEF, lowering NT-proBNP levels, and decreasing hospitalizations for HF while not significantly raising the risk of renal impairment. However, the risk of symptomatic hypotension associated with ARNI is higher compared to conventional therapy, necessitating close monitoring by physicians in practice

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	23
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	ACUTE RIGHT HEART FAILURE IN A PERIPARTUM FEMALE: UNMASKING SEVERE MITRAL REGURGITATION THROUGH AN ATRIAL SEPTAL DEFECT.
Author Block:	Chilan Nguyen, John Ramachandran, Katie Nguyen, Patrick Pender, Liverpool Hospital, Sydney, Australia, University of New South Wales, Sydney, Australia
Abstract Body:	**Background:** A rarely recognised association exists between mitral regurgitation (MR) and ostium secundum atrial septal defects (ASDII). MR associated with ASDII is seldom clinically significant, with no severe cases previously documented in the peripartum population **Case:** A 44-year-old female presented with acute per-vaginal bleeding after a second-trimester miscarriage and a one-month history of peripheral oedema. Her medical history included hypothyroidism and ex-intravenous drug use. She had emergency surgery to remove retained products of conception. Echocardiography revealed severe MR due to flail mitral valve leaflet and ruptured chordae with regurgitant flow shunting into the right atrium via an ASDII. This caused right ventricular dysfunction and pulmonary hypertension. She underwent mitral valve repair with neo-chordae placement and closure of the ASDIII. The small ASDII was functionally enlarged by severe MR and pregnancy related hypervolaemia. The MR, likely subacute, was hemodynamically offloaded by the ASDII, delaying symptoms. **Decision-making:** An ASDII and pregnancy can alter the clinical course of MR, delaying diagnosis. Her worsening dyspnoea and haemodynamics necessitated urgent surgery. Literature supports concurrent repair of MR and ASDII to optimise outcomes **Conclusion:** This case highlights the interplay between ASDII and severe MR, causing right heart failure and pulmonary hypertension in a peripartum female.

Early recognition is crucial to prevent morbidity.

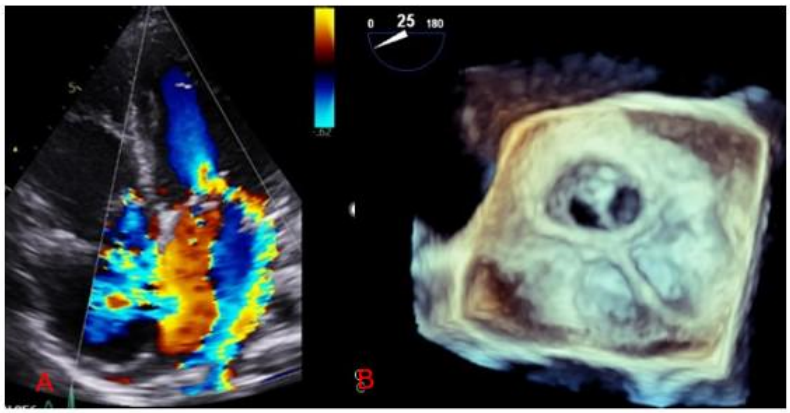


Figure A: Shunting of regurgitant flow from severe MR from the left atrium into the right atrium via an ASD seen with colour flow doppler on transthoracic echocardiography (apical 4-chamber view)
Figure B: double fenestrated ASDII seen on 3D trans-oesophageal echocardiography (view from left atrial aspect).

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	24
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	THE PROGNOSTIC VALUE OF CMR-MODELLED PULMONARY CAPILLARY WEDGE PRESSURE IN HYPERTROPHIC CARDIOMYOPATHY PATIENTS
Author Block:	Mengyao Hu, XIAODAN ZHAO, Pei Yang, Yipei Song, Shuang Leng, Ru San Tan, Angela Su-Mei Koh, Chunyuan Khoo, Wei Qin Lin, Ching Hui Sia, Sven Plein, Pankaj Garg, Lianggeng Gong, Liang Zhong, National Heart Centre Singapore, Singapore, Singapore, The Second Affiliated Hospital, Jiangxi Medical College, Nanchang University, Nanchang, China
Abstract Body:	**Background:** The aim of this study was to determine the prognostic value of pulmonary capillary wedge pressure (PCWP) by using cardiovascular magnetic resonance (CMR) in patients with hypertrophic cardiomyopathy (HCM). **Methods:** HCM patients who underwent a standard CMR were enrolled. Left ventricular mass (LVM) and left atrial (LA) maximal volume were determined from CMR. Computational of PCWP was performed using the following previous published formula: PCWP = 5.7591 + (0.07505×LAV) + (0.05289×LVM) - (1.9927×sex) [female = 0; male = 1]. At follow-up, sudden cardiac death (SCD) and aborted SCD were considered as the major adverse cardiac events (MACE). **Results:** A total 400 patients (median age, 53 years, age range 18-81 years, 68% men) were included in the study. During median follow up of 30.6 months, MACE occurred in 27 patients (6.8%). The median PCWP was 18.5 (15.7 - 21.6) mmHg. HCM patients with higher PCWP (≥18.5 mmHg) had a higher risk of MACE than those with smaller PCWP. Survival analysis demonstrated that PCWP≥18.5 mmHg (HR: 2.67; 95% CI: 1.247-5.696; P<0.05) was associated with higher MACE. **Conclusion:** In patients with HCM, left ventricular filling pressure measured

as CMR-modelled PCWP provides prognostic information above established predictors.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	25
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	MOLECULAR SIGNATURES OF HEART FAILURE WITH PRESERVED EJECTION FRACTION: EXPLORING THE ROLES OF BECLIN-1, GRP78, AND CASPASE-3 IN AUTOPHAGY AND ENDOPLASMIC RETICULUM STRESS
Author Block:	Hendri Susilo, Citrawati Dyah Kencono Wungu, Department of Cardiology and Vascular Medicine, Faculty of Medicine Universitas Airlangga, Surabaya, Indonesia, Department of Physiology and Medical Biochemistry, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
Abstract Body:	**Background:** Heart failure with preserved ejection fraction (HFpEF) accounts for 30-75% of heart failure (HF) cases worldwide. Dysregulated autophagy, endoplasmic reticulum (ER) stress, and apoptosis are implicated in HFpEF pathogenesis. This study investigated the roles of Beclin-1 (autophagy regulator), GRP78 (ER stress marker), and caspase-3 (apoptosis mediator) in HFpEF development. **Methods:** This cross-sectional study included 36 patients with HFpEF and 30 healthy controls recruited from Universitas Airlangga Hospital, Indonesia. Blood samples were analyzed for Beclin-1, GRP78, and caspase-3 levels, while NT-proBNP was used to confirm HFpEF risk. To explicate the relationship between these markers and HFpEF, we performed multivariate logistic regression adjusted for race, E/A ratio, and HDL cholesterol. Receiver operating characteristic (ROC) curves were also conducted to determine diagnostic accuracy. **Results:** HFpEF patients exhibited significantly lower levels of Beclin-1 and higher caspase-3 levels compared to controls (0.43 ± 0.20 vs 0.60 ± 0.18 ng/mL and 6.48 ± 6.12 vs 3.15 ± 2.30 ng/mL, respectively). Lower Beclin-1 (adjusted odds ratio [aOR]: 2.99; 95% CI: 1.03-8.73; p = 0.04) and higher

caspase-3 (aOR: 3.75; 95% CI: 1.29-10.85; p = 0.02) were also independently associated with HFpEF in multivariate analysis. GRP78 was decreased in HFpEF patients compared to controls (0.38 ± 0.41 vs 0.5 ± 0.48 mg/dL), but this was not significant. ROC curves demonstrated moderate diagnostic performance, with areas under the curve (AUCs) of 0.649 for Beclin-1 and 0.690 for caspase-3, with optimal cutoffs of 0.2585 ng/mL and 5.7125 ng/mL, respectively.

Conclusion: Reduced Beclin-1 and elevated caspase-3 levels were significantly associated with HFpEF, providing insights into its molecular mechanisms and potential biomarkers for diagnosis.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	26
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	MASSIVE RIGHT-SIDED INFECTIVE ENDOCARDITIS WITHOUT INTRAVENOUS DRUG USE: A UNIQUE POST-CURETTAGE COMPLICATION
Author Block:	Enrico Ananda Budiono, An A. Asrial, Kunti N. Umamy, Lintang Perwitasari, Daniel Tristan, Hanimar Chania, Universitas Sebelas Maret, Surakarta, Indonesia, UNS Hospital, Sukoharjo, Indonesia
Abstract Body:	**Background:** Right-sided infective endocarditis (IE) is a rare clinical condition, accounting for only 5-10% of all IE cases. It is predominantly associated with intravenous drug use (IVDU) or cardiac devices, making its occurrence in patients without these risk factors extremely rare. **Case:** A 29-year-old woman presented with an intermittent fever, productive cough, dyspnea, and bilateral leg edema, starting after a curettage for a 10-week pregnancy loss that had occurred two months prior. Despite prior hospitalization, her symptoms persisted, leading to admission at our facility. Examination revealed febrile (39.4°C), hypotension (blood pressure 80/66 mmHg), tachycardia, tachypnea, hypoperfusion, anemic conjunctiva, grade III/6 at lower left sternal border (LLSB) murmur, and right heart failure signs. Labs indicated anemia, leukocytosis, thrombocytopenia, elevated transaminases, and D-dimer. Echocardiography showed right chamber dilatation, severe tricuspid regurgitation with massive vegetations on all three cusps, and moderate pericardial effusion. Blood cultures confirmed *Staphylococcus aureus*, confirming the diagnosis of definite IE. She received vasopressors, antibiotics, and anticoagulation in the intensive care unit (ICU). Vegetation evacuation and tricuspid valve replacement (TVR) were performed. Postoperatively, she improved, and follow-up echocardiography showed favourable outcomes.

Decision-making: The presence of prolonged fever and signs of right heart failure prompted a comprehensive evaluation. The diagnosis of IE was established based on the modified Duke Criteria, which included positive blood cultures for *S. aureus* and evidence of massive vegetations. The patient required ICU admission due to septic shock, a life-threatening complication of IE. Surgical intervention with TVR was performed, given the refractory bacteremia and vegetation size exceeding 20 mm.
Conclusion: Right-sided IE can occur in the absence of conventional risk factors, such as IVDU or cardiac devices. This case emphasizes the importance of a thorough diagnostic workup, as post-curettage IE may serve as an underrecognized predisposing factor.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	27
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	MISSED CASE OF SHEEHAN SYNDROME PRESENTING AS DILATED CARDIOMYOPATHY
Author Block:	KRITI SONI, Dinesh Choudhary, SARDAR PATEL MEDICAL COLLEGE, BIKANER, India

Abstract Body:

Background: The patient presented with signs of cardiac failure and severe left ventricular systolic dysfunction. She experienced amenorrhea, lactation failure, absence of axillary & pubic hair following childbirth 10 years ago.

Case: 43 yr old non diabetic female with history of childbirth 10 yrs prior, presented with progressive breathlessness, effort intolerance and dependent edema over the last year. She had lethargy, pallor, sparse body hair, atrophied breasts, husky monotonous voice, dyspnea and leg edema. Her HR was 76/min, BP 100/70 mmHg, apex beat diffuse, shifted down and outwards, and S3. Further enquiry revealed complicated, vaginal delivery with PPH. Her Hb was 10.5 g/dl with normal electrolytes, RFT & LFT. Echo showed dilated cardiac chambers with severe global left vent hypokinesia, severely impaired LV ejection fraction (28.7%), grade III mitral regurgitation (MR) & septal to posterior wall delay. Based on above history & examination with vital clues of amenorrhea and lactation failure after her last childbirth, she was provisionally diagnosed with Sheehan syndrome. Brain MRI revealed enlarged pituitary fosse filled with CSF. Pituitary gland was thinned and compressed.

Decision-making: Sheehan syndrome presenting with cardiac failure and its reversibility with hormone replacement is one of the rarest manifestations. Diagnosis was initially missed because of inadequate

attention to typical history of complicated childbirth, failure of lactation & amenorrhea. Hence she was devoid of hormone replacement. It could be the reason for development and persistence of dilated cardiomyopathy. After confirming deficient level of thyroid and cortisol hormone(morning cortisol level-3.11mcg/dl, normal range 6.2-19.4mcg/dl) replacement therapy was started which improved her symptoms and cardiac function (MR became mild from moderate andEF improved to 43% from 28.7%.

Conclusion: Diagnosing Sheehan syndrome in immediate postpartum period is very crucial.Physicians should have high clinical suspicion in patients with PPH or unexplained hypotension-hypopituitarism due to acute pituitary necrosis. Persistent amenorrhea and failure of lactation may be important clues.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	28
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	UNUSUAL PRESENTATION OF MULTIPLE PERICARDIAL HYDATID CYSTS WITHOUT HEPATIC INVOLVEMENT: A RARE CASE REPORT
Author Block:	Priyanshu Soni, Dinesh Choudhary, Pintu Nahata, SR, Sunil Kumar Budania, R.G Kumawat, Yudhisthir Yadav, Sardar Patel Medical College, Bikaner, India
Abstract Body:	**Background:** Cardiac hydatid cysts, caused by *Echinococcus granulosus*, are rare, accounting for <2% of all cases. They are typically located in the myocardium, but can also affect the right ventricle, atrium, pericardium, and interventricular septum. Symptoms are often nonspecific and may include chest pain, dyspnea, or cardiac tamponade. **Case:** A 64 year old woman presented with fever, chest pain, and progressive dyspnea. She had a history of contact with a pet dog and no significant medical history. Echocardiography showed multiple pericardial cysts, including a myocardial cyst compressing the right atrium and ventricle. CECT thorax revealed multiple hydatid cysts in the anterior mediastinum and pericardium. The patient was started on albendazole and chose not to undergo surgery. At follow-up, her symptoms improved, and she continued on albendazole for six months.

Fig: CECT Thorax showing multiple pericardial hydatid cysts

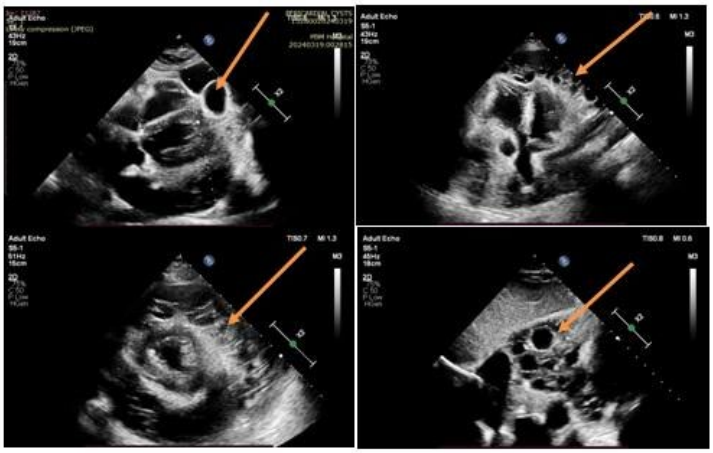


Fig: 2D echocardiography showing multiple pericardial hydatid cysts

Decision-making: Cardiac hydatid disease, though rare, can lead to severe complications like heart failure and tamponade. Diagnosis is typically made via echocardiography and confirmed with imaging like CT and MRI. Albendazole is effective in treating inoperable cases, as in this patient.

Conclusion: This case highlights the rare occurrence of multiple pericardial hydatid cysts in the absence of hepatic involvement. Cardiac echinococcosis should be considered in individuals with exposure to livestock or canines. Timely diagnosis and management with surgery or anti-helminthic treatment are essential for preventing complications.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	29
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	PHANTOM TUMOR OF THE LUNG: A RARE PRESENTATION OF LOCALISED INTERLOBAR EFFUSION IN HEART FAUILURE
Author Block:	KRITI SONI, Dinesh Choudhary, SARDAR PATEL MEDICAL COLLEGE, BIKANER, India

Abstract Body:

Background: Phantom tumors, or localized interlobar effusions, are rare and benign manifestations of congestive heart failure, often misinterpreted as pulmonary masses. Prompt recognition is crucial to avoid unnecessary diagnostic and therapeutic interventions.

Case: A 65-year-old male presented with progressive shortness of breath and a dry cough for five days. He had a history of chest pain two months prior, suggestive of ischemic heart disease. On examination, the patient exhibited tachypnea (32/min), tachycardia (109/min), raised jugular venous pressure, an S3 gallop, and a grade 2/6 pansystolic murmur at the apex. Fine crepitations were audible bilaterally, with diminished breath sounds on the right side. Laboratory tests revealed elevated NT-proBNP levels (4200 pg/mL). A chest X-ray (CXR) demonstrated a well-circumscribed, oval, homogeneous shadow (4×5 cm) in the right middle zone, suggestive of a pulmonary mass. Echocardiography revealed impaired left ventricular systolic function (EF: 35%) and moderate mitral regurgitation.

Decision-making: The initial differential diagnosis included a pulmonary neoplasm or a loculated effusion. Considering the clinical presentation and imaging findings, a working diagnosis of phantom tumor was made. Immediate initiation of CHF management, including intravenous loop diuretics and fluid restriction, was undertaken. Serial CXR on days 2 and 5 showed complete resolution of the mass, confirming the diagnosis. A follow-

up CT scan demonstrated resolution of the interlobar effusion with persistent fissural thickening.

Conclusion: This case highlights the importance of recognizing phantom tumors as a rare but reversible manifestation of congestive heart failure. Accurate diagnosis based on clinical context and imaging can prevent unnecessary invasive procedures, reduce patient anxiety, and optimize resource utilization. The rapid resolution of the pseudotumor with standard heart failure management underscores the efficacy of timely and targeted therapy. Awareness of this condition is essential for clinicians to differentiate it from more ominous pathologies, ensuring optimal patient care and minimizing unnecessary costs.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	30
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	CUMULATIVE RESTING HEART RATE LOAD AND CARDIOVASCULAR RISK IN PATIENTS WITH HEART FAILURE
Author Block:	Jun Hao, Jingyang Wang, Rui Shi, Qi Wang, Jiayu Feng, Yanmin Yang, Yuxiao Hu, Tao Chen, Kangyu Chen, Fuwai Hospital, National Center for Cardiovascular Diseases, Peking Union Medical College, Beijing, China, School of Public Health, Xi'an Jiaotong University Health Science Center, Xi'an, China

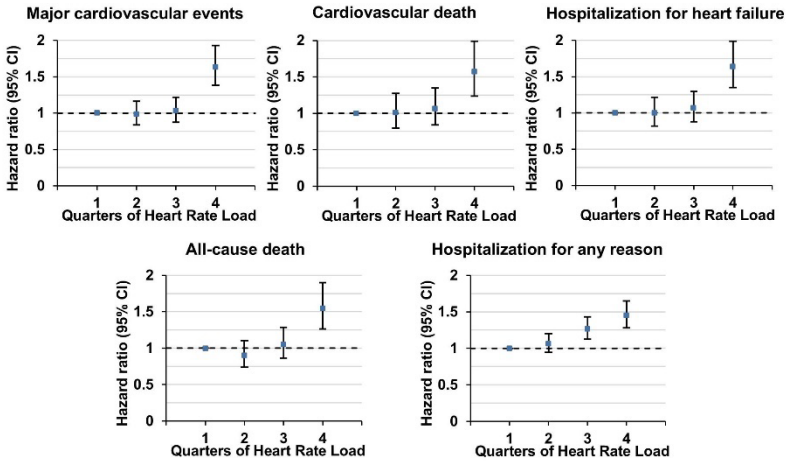
Abstract Body:

Background: Resting heart rate has been an available vital sign with important prognostic significance. This study aims to assess the association between cumulative resting heart rate load, a metric accounting for the magnitude and duration of elevated heart rate, and adverse outcomes in chronic heart failure (HF) patients.

Methods: We utilized five RCTs including the BEST, GUIDE-IT, HF-ACTION, RELAX and TOPCAT. Cumulative resting heart rate load was calculated as the ratio of the area under the curve (AUC) for resting heart rate ≥70 bpm to the AUC for all measurements before the primary outcome. Cox proportional hazards regression models were used to examine the association between cumulative heart rate load and outcomes.

Results: 5,428 patients with chronic HF were included. Higher cumulative resting heart rate load was significantly associated with increased risk of major cardiovascular events (HR: 1.31; 95% CI: 1.24-1.38), cardiovascular death (HR: 1.17; 95% CI: 1.08-1.27), HF hospitalization (HR: 1.34; 95% CI: 1.26-1.43), all-cause death (HR: 1.20; 95% CI: 1.12-1.29), and any hospitalization (HR: 1.20; 95% CI: 1.15-1.25). Cumulative heart rate load showed superior predictive value for all outcomes compared to baseline resting heart rate, mean heart rate, heart rate SD, and heart rate time in the target range.

Conclusion: Cumulative resting heart rate load has a stronger predictive value for adverse events compared to traditional measures of heart rate in patients with chronic HF.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	32
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EARLY ECHOCARDIOGRAPHIC EVALUATION IN PRE AND POST CHEMOTHERAPY PATIENTS AND ITS CORRELATION WITH SERUM BIOMARKERS
Author Block:	Radha Nandipati, Krishna Prasad Nevali, Tirupati Rao Kondaveeti, John Satish Rudrapogu, NRI Academy of sciences, Chinakakani, Guntur, India
Abstract Body:	**Background:** Chemotherapy-induced cardiotoxicity is a major concern, leading to myocardial dysfunction and heart failure. Traditional monitoring with left ventricular ejection fraction (LVEF) often detects damage too late. Advanced tools like global longitudinal strain (GLS), global circumferential strain (GCS), and NT-proBNP biomarkers offer earlier detection, enabling timely interventions. This study evaluates the impact of chemotherapy on cardiac function using strain imaging and biomarkers. **Methods:** This prospective, observational study included 246 patients undergoing chemotherapy. 2D echocardiography and speckle-tracking echocardiography (STE) were used to assess GLS and GCS pre- and post-chemotherapy. NT-proBNP levels were measured to correlate biochemical changes with cardiac dysfunction. Statistical analyses evaluated relationships between strain parameters and biomarkers, considering risk factors such as hypertension, diabetes, and smoking. **Results:** GLS and GCS showed significant reductions ($p < 0.001$) post-chemotherapy, correlating with NT-proBNP elevation and early myocardial dysfunction. A >15% reduction in GLS identified cardiotoxicity before LVEF decline.

Cardioprotective therapy led to 60% improvement in GLS, reducing severe cardiac events.

Conclusion:

Strain imaging and biomarkers enable early detection and intervention, reducing morbidity. Integrating these tools into routine monitoring can optimize long-term cardiovascular outcomes in cancer survivors. Further studies should focus on standardizing protocols and AI integration to enhance predictive accuracy.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	33
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	AMYLOID IN UNEXPECTED PLACES: A RARE CASE OF MULTIORGAN TRANSTHYRETIN AMYLOIDOSIS
Author Block:	Ting Yi Cheow, Chong Keat Tan, Geak Poh Tan, Tan Tock Seng Hospital, Singapore, Singapore

Abstract Body:

Background: Transthyretin amyloidosis (ATTR) is a systemic disease which affects the heart and nerves. We report a case of wild type cardiac ATTR with unusual pulmonary manifestation of fleeting lung nodules and intermittent hemoptysis.

Case: An elderly man in his 80s presented with a 3 day history of hemoptysis. Past medical history includes atrial fibrillation, left bundle branch block, ischemic heart disease, diabetes, hypertension, hyperlipidemia, and chronic kidney disease. Computed tomography (CT) of the thorax showed an irregular 1.5cm left upper lobe subsolid nodule. Histological examination via percutaneous biopsy showed focal Masson bodies with reactive pneumocytes suggestive of organizing pneumonia.

1 month later, he developed congestive heart failure (hsTroponin I 61 ng/L, BNP 247 pg/ml). Transthoracic echocardiogram showed mild left ventricular hypertrophy with reduced ejection fraction of 40%. Myocardial perfusion scan revealed a small area of mild inferior ischemia.

Decision-making: Shortly after, the symptoms of hemoptysis and fluid overload recurred. Interval CT thorax showed resolution of previously reported nodule but there were new nodules and patchy consolidation. Autoimmune screen was positive for anti-SRP antibodies. Cardiac magnetic resonance imaging showed features suggestive of cardiac amyloidosis with diffuse subendocardial enhancement and T1 value of 1060ms. Additional

Congo red stain to the original lung biopsy specimen confirmed the presence of amyloid deposits. Myeloma panel and bone marrow examination for thrombocytopenia was negative for plasma cell dyscrasia. Subsequent fat pad biopsy result was normal.
Tc-99m pyrophosphate scintigraphy was strongly suggestive of ATTR. Mass spectrometry of both lung and bone marrow specimens confirmed the diagnosis of ATTR. Genetic testing did not identify any reportable variants for familial ATTR. He was started on Tafamidis with resolution of hemoptysis and improvement of heart failure symptoms.
Conclusion: Organizing pneumonia with hemoptysis is a rare but clinically important manifestation of ATTR. A heightened awareness of rarer organ involvement may facilitate earlier diagnosis and treatment.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	34
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CORRELATION BETWEEN LIPOPROTEIN(A) LEVELS AND CORONARY ARTERY DISEASE BASED ON CCTA
Author Block:	Lan Huong Thi Le, Vinh Pham, Tam Anh Ho Chi Minh General Hospital, Hồ Chí Minh, Viet Nam

Abstract Body:

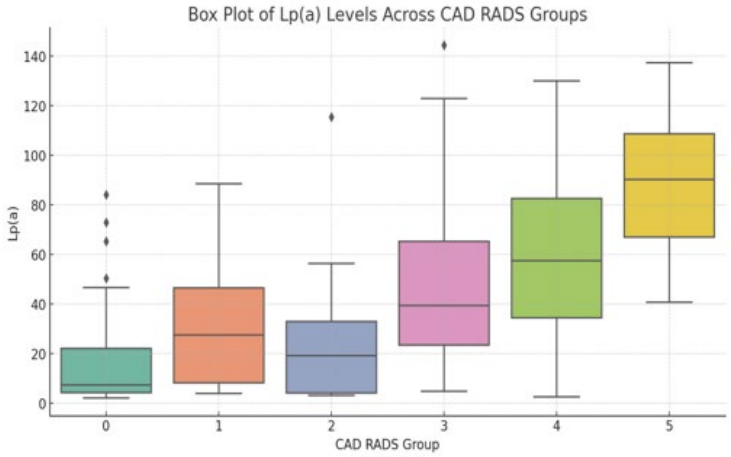
Background: Coronary artery disease (CAD) is a significant global health issue. Lipoprotein(a) [Lp(a)] has been implicated in the pathogenesis of atherosclerosis and an increased risk of CAD. This study aims to compare Lp(a) levels among patients suspected CAD across various CAD-RADS grades and to examine the correlation between Lp(a) and high-risk plaque (HRP) observed in CCTA.

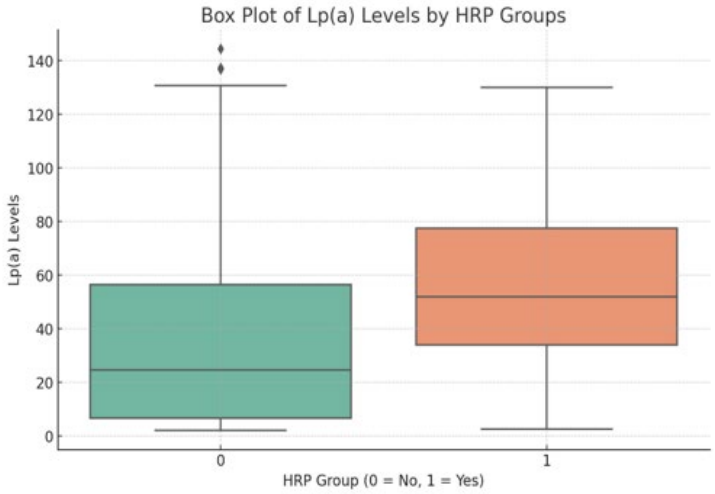
Methods: This retrospective study included patients who underwent CCTA for suspected CAD. Patients were categorized into CAD-RADS groups (0 to 5). HRP assessment included identifying at least two of the following features: low attenuation (<30 HU), spotty calcification, positive remodeling, or a napkin-ring sign. Serum Lp(a) levels were measured and analyzed across CAD-RADS categories.

Results: The study enrolled 189 patients (mean age: 62.72 ± 11.98 years, 55.6% male). Lp(a) levels significantly varied among CAD-RADS categories ($p < 0.001$). Mean Lp(a) levels were: CAD-RADS 0 (16.05 mg/dl), 1 (32.1 mg/dl), 2 (24.4 mg/dl), 3 (47.4 mg/dl), 4 (60.5 mg/dl), and 5 (89.7 mg/dl). Obstructive CAD had higher Lp(a) levels (59.5 mg/dl) compared to non-obstructive CAD (21.78 mg/dl). Additionally, patients with HRP had significantly higher mean Lipoprotein(a) levels (Lp (a) = 55.92 mg/dl) compared to those without HRP (Lp (a) = 37.52 mg/dl) with t-value = -3.164, $p < 0.002$.

Conclusion: Elevated Lp(a) levels are linked to increased CAD severity and

HRP presence, underscoring its potential as a biomarker for risk assessment in CAD management.





Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	35
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	NEW MUTATION IN SERPINC1 (CHR1-173884049 C.50A>G) LEADING TO ANTITHROMBIN DEFICIENCY IN A TEENAGER: A CASE REPORT
Author Block:	Wenchi Guan, Jun Liu, Fuwai Hospital, Chinese Academy for Medical Science, National Center for Cardiovascular Disease, Beijing, China, Fuwai Shenzhen Hospital, Chinese Academy of Medical Sciences, Shenzhen, China
Abstract Body:	**Background:** Genetic and acquired risk factors both play important role in the development of pulmonary embolism (PE) and venous thromboembolism (VTE). Specifically, for adolescents with VTE, congenital coagulation abnormalities should be considered when looking for possible risk factors. Inherited Antithrombin (AT) deficiency due to mutations in the SERPINC1 gene is a well-known risk factor for genetic thrombophilia. **Case:** We reported the case of a 16-year-old Chinese adolescent with PE and DVT caused by decreased AT activity due to a new mutation (chr1-173884049 c.50A>G) in SERPINC1, which encodesAT. The patient was administrated to the hospital with dyspnea and leg swelling persisting for two weeks. He denied any history of surgery, invasive procedures, fracture, restricted activity, recent infection, congenital heart disease, or medication use such as asparaginase and hormones. The ultrasound revealed DVT in both lower limbs, while computed tomography pulmonary angiography (CTPA) confirmed multiple embolisms in both pulmonary arteries. He was treated successively with low-molecular-weight heparin and heparin, however, the thrombosis progressed rapidly despite the therapy. The activity of AT were continuously below the normal range with the test interval of more than a week (49%, 36%, and 44%, respectively; normal reference range:80-120%), which led us to suspect that VTE was caused by hereditary AT deficiency. Gene detection

showed a new mutation (chr1-173884049 c.50A>G) in SERPINC1, which encodes AT. Treatment with argatroban and rivaroxaban yielded thrombotic reduction.

Decision-making: Identifying this novel SERPINC1 mutation underscores the need for a deeper understanding of the gene's pathogenicity, which could enable personalized anticoagulation strategies and optimize clinical management to mitigate thrombotic risks.

Conclusion: We identified a novel mutation in the SERPINC1 gene, which might lead to AT deficiency and reduce its heparin-binding capacity.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	36
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	DETECTING PULMONARY HYPERTENSION AND PROGNOSIS WITH ELECTROCARDIOGRAPHY AND MACHINE LEARNING APPROACH
Author Block:	Jui-Tzu Huang, Shih-Hsien Sung, Taipei Veterans General Hospital, Taipei, Taiwan

Abstract Body:

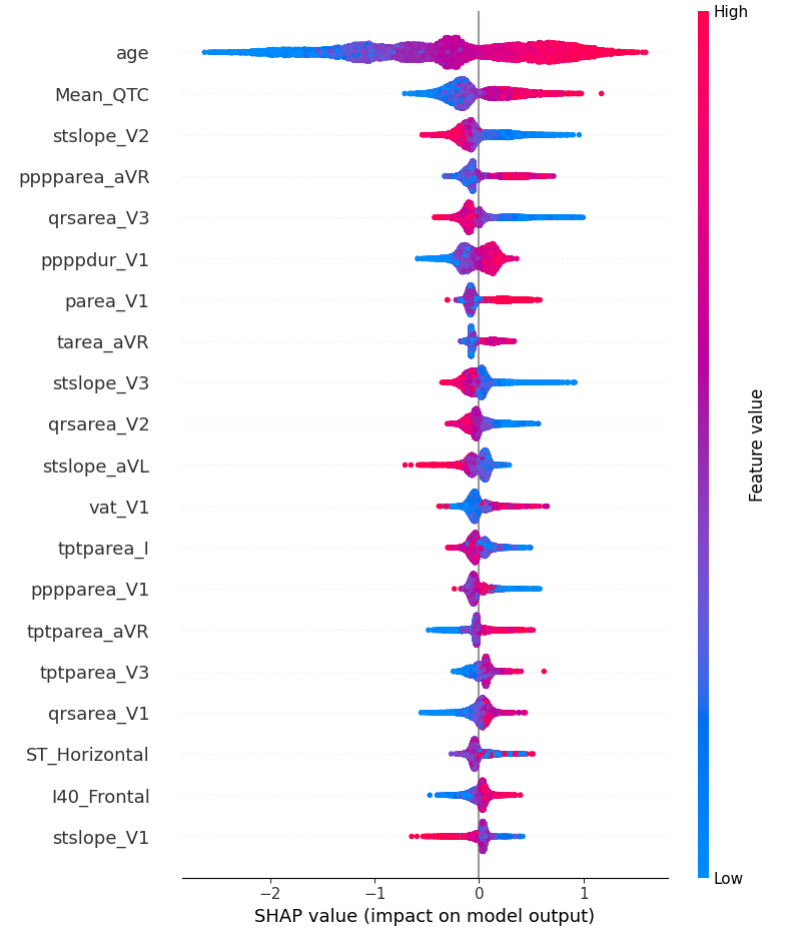
Background: Pulmonary hypertension is commonly found on patients with heart disease and has major prognostic implication. The gold standard for diagnosis is obtained through right heart catheterization. Early detection and possibly non-invasive diagnostic tool are essential.

Methods: We enrolled 53069 patients received ECG and echocardiography. Pulmonary hypertension was defined as right ventricular systolic pressure more than 40 mmHg found on echocardiography, and around 1612 patients received right heart catheterization. Machine learning algorithm based on training set 80% and test set 20% with 5-fold cross validation.

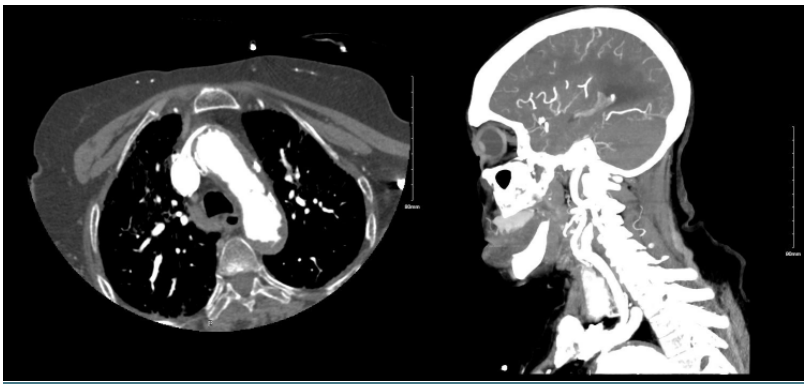
Results: AI algorithms with CatBoost, XGBoost, LightGBM, and a multi-layered deep learning model (ResNet1D18) which reported the training accuracy and AUC as (0.850, 0.850), (0.846, 0.842), (0.849, 0.851) and (0.967, 0.953); the validation accuracy and AUC as 0.838, 0.842.

Conclusion: The machine learning algorithms provided robust performance on detecting PH. We may identify potentially important factors of PH on EKG

through further feature selection.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	37
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	MURAL THROMBUS IN THE AORTIC ARCH: AN UNCOMMON CAUSE OF RECURRENT TIAS, A CASE REPORT
Author Block:	Daniel Yow, Dawid Ozga, Olukayode Ahmed Busari, Allison Foster, George Juang, South Brooklyn Health, Brooklyn, NY, USA
Abstract Body:	**Background:** Aortic arch mural thrombus is a rare cause of transient ischemic attack (TIA) and stroke, often occurring in the context of atherosclerosis. Embolization from aortic mural thrombi can lead to recurrent ischemic events, and proper identification is crucial, as emphasized in the American Heart Association (AHA) guidelines for embolic stroke of undetermined source (ESUS). **Case:** An 82-year-old female with hypertension, CKD, and prior stroke presented with altered mental status and slurred speech. Initial CT head and MRI brain were negative for stroke, but CTA revealed an aortic arch mural thrombus with atherosclerosis. She was treated for TIA with Aspirin, Plavix, and Lipitor. During hospitalization, she developed AKI on CKD, likely due to contrast exposure. Twelve days post-discharge, she returned with similar symptoms, but repeat imaging was unremarkable. Neurology recommended continuing dual antiplatelet therapy for three weeks with close follow-up.



Decision-making: The AHA guidelines highlight the importance of investigating the aortic arch for embolic sources in ESUS, and should be considered especially in cases of recurrent TIA. Dual antiplatelet therapy is a viable option, particularly in patients with contraindications to anticoagulation.

Conclusion: Aortic mural thrombus should be considered in patients with recurrent TIA. Dual antiplatelet therapy and careful follow-up are essential to manage recurrent embolic risk.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	38
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	COMPARATIVE IMPACT OF ACC/AHA AND ESC GUIDELINE DEFINITIONS OF ISOLATED DIASTOLIC HYPERTENSION ON CARDIOVASCULAR RISK IN YOUNG AND MIDDLE-AGED ADULTS: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Maryam Zaid, Yiming Wan, Yong Ling, Xiang Li, Aikedan Maimaiti, Fudan University, Shanghai, China
Abstract Body:	**Background:** The relationship of isolated diastolic hypertension (IDH) and its relationship with cardiovascular disease (CVD) in young and middle-aged adults is highly disputed. We evaluated the associations between the two major IDH definitions (ACC/AHA guideline and 2018 ESC or other guidelines) and CVD. **Methods:** Cohort studies that evaluated the relationship between IDH under low threshold (ACC/AHA guideline: DBP≥80 mmHg and SBP<130 mmHg) or high threshold (ESC guideline: DBP ≥ 90 mmHg and SBP<140 mmHg) and CVD in young and middle-aged populations (<65y) were identified through PubMed, Web of Science, and Cochrane library searches (Jan 1950 to September 1st, 2023). Pooled hazard ratios (HRs) and 95% confidence intervals (CIs) were calculated utilizing random effects model. Chi^2 test and I^2 statistic were used to investigate heterogeneity. Among 4,800 articles identified, 15 were included in our meta-analysis. **Results:** The association between IDH with low threshold and the risk of CVD (HR: 1.65[95%CI:1.23, 2.20]) was weaker than that of IDH with high threshold (HR:1.83[1.29-2.58]). IDH defined as low threshold had a slightly lower risk of developing cardiovascular mortality (HR:1.91[1.33-2.73]) than those with IDH defined as high threshold (HR:2.01[1.30-3.11]). The relationship of IDH with

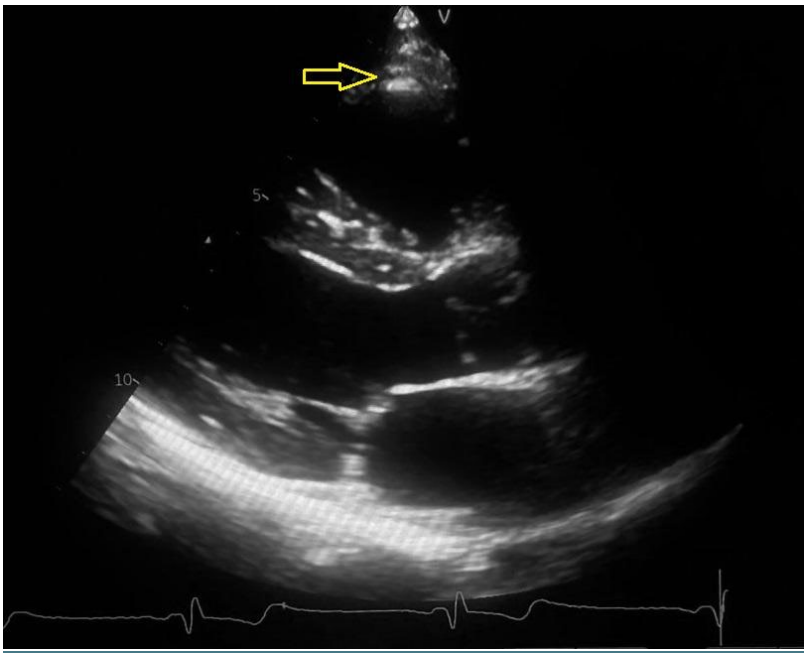
high threshold and nonfatal CVD was insignificant (HR:1.06[0.73-1.52]). Insufficient data was available for low threshold.
Conclusion: Regardless of guideline definition, IDH is significantly associated with CVD and cardiovascular mortality in young and middle-aged adults. The observed risk is notably higher than that previously identified in older adults.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	39
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	ASSOCIATION BETWEEN NON-HIGH DENSITY LIPOPROTEIN CHOLESTEROL AND TYPE OF CORONARY ARTERY DISEASE IN NON-DIALYTIC CHRONIC KIDNEY DISEASE PATIENTS WHO UNDERWENT ANGIOGRAM IN TERTIARY HOSPITAL: A CROSS-SECTIONAL STUDY
Author Block:	Louie Real, Harold Henrison C. Chiu, Lourdes Ella G. Santos, Cardinal Santos Medical Center, San Juan City, Philippines
Abstract Body:	**Background:** Non-high-density lipoprotein cholesterol (non-HDL-C) is a comprehensive measure of atherogenic lipoproteins, yet its role in predicting coronary artery disease (CAD) severity in non-dialytic chronic kidney disease (CKD) patients remains underexplored. This study examined the association between non-HDL-C levels and CAD type among non-dialytic CKD patients at Cardinal Santos Medical Center. **Methods:** This retrospective cross-sectional study included 218 non-dialytic CKD patients who from January 2020 to January 2024. Patient data, including non-HDL-C levels, CAD type, and CKD stage, were extracted from medical records. Poisson regression was used to estimate prevalence ratios for obstructive CAD, adjusting for socio-demographic and clinical factors. **Results:** Elevated non-HDL-C levels (≥130 mg/dL) were significantly associated with a higher likelihood of obstructive CAD. Among patients with elevated non-HDL-C, 100% were classified as having obstructive CAD, in contrast to 58.67% of those with normal non-HDL-C levels ($p<0.001$). Poisson regression indicated that elevated non-HDL-C was a strong predictor of obstructive CAD (adjusted prevalence ratio: 1.31; 95% CI: 1.15-1.49). The association was consistent across CKD stages 3a, 3b, and 4, highlighting non-HDL-C's stability as a predictor. **Conclusion:** Non-HDL-C levels are strongly linked to obstructive CAD in non-

dialytic CKD patients, suggesting its utility as a valuable risk stratification marker. Incorporating non-HDL-C into lipid management guidelines for CKD patients could enhance CAD risk assessment and guide lipid-lowering therapies. Further prospective studies are warranted to confirm these findings and explore causative pathways.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	40
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	TRACING GESTATIONAL DIABETES MELLITUS THROUGH THE LENS OF EPICARDIAL FAT: EPICARDIAL ADIPOSE TISSUE THICKNESS AS A NEW FRONTIER IN PREDICTION
Author Block:	Pranesh Samiappan, Nambirajan Jeyabalan, COIMBATORE MEDICAL COLLEGE, COIMBATORE, TN, India
Abstract Body:	**Background:** Gestational Diabetes Mellitus (GDM) is a major metabolic disorder during pregnancy, associated with adverse maternal and neonatal outcomes as well as long-term risks of type 2 diabetes and cardiovascular diseases.This study evaluates transthoracic echocardiographic epicardial adipose tissue (EAT) thickness as an early predictor of GDM and its related complications. **Methods:** This is a prospective Cohort study of 400 antenatal women attending OPD, Department of Cardiology, Coimbatore Medical College Hospital(CMCH) from May 2022 to May 2024. Transthoracic ECHO was performed at 16 -20 weeks of gestation and EAT thickness measured. Glucose challenge test was done at 24 to 28 weeks of Gestation. Logistic regression and ROC analysis were used to assess the predictive value of EAT thickness for GDM. **Results:** Of 400 women, 56 (14%) developed GDM. EAT thickness was independently associated with GDM (OR = 2.64, 95% CI: 2.49-3.31; P < 0.001). An EAT thickness ≥5.5 mm had 95.4% sensitivity and 51.5% specificity for GDM prediction (AUC = 0.790, 95% CI: 0.768-0.812). GDM was linked to adverse outcomes including large-for-gestational-age infants, preterm delivery, NICU admission, and hyperbilirubinemia (P < 0.001). **Conclusion:** EAT thickness measured via echocardiography is a reliable, non-

invasive predictor of GDM and its adverse outcomes. Early integration of EAT assessment into routine obstetric care could improve risk stratification and management.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	42
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	REAL WORLD EFFECTIVENESS AND SAFETY OF TELMISARTAN AND AMLODIPINE FIXED DOSE COMBINATION IN INDIAN HYPERTENSIVE PATIENTS (TACT INDIA): A PROSPECTIVE, MULTI-CENTER AND OBSERVATIONAL STUDY
Author Block:	Ashok Kumar Das, Arindam Pande, Viveka Kumar, Mangesh Tiwaskar, Jabir Abdullakutty, Jaspal Arneja, Rajat Sharma, Devang Desai, Febin Francis, Drnitin Zalte, Amarnath Sugumaran, Sandesh Sawant, Senthilnathan Mohanasundaram, Jaideep Gogtay, Cipla Ltd, Mumbai, India
Abstract Body:	**Background:** Hypertension (HTN) is a prevalent cardiovascular condition globally, with a prevalence of 35.5% in India. Telmisartan (T) / Amlodipine (A) fixed-dose combination (FDC) is a commonly prescribed treatment and yet there is limited research with larger studies conducted on the safety and effectiveness in Indian patients. This study evaluated the effectiveness and safety of T/A FDC in patients with hypertension. **Methods:** This was a real-world prospective, multicentre, observational study of patients with HTN in India from September 2023 to June 2024. Adults ≥ 18 years, newly diagnosed HTN (SBP/DBP ≥140/90 mmHg) or inadequately controlled on monotherapy and who were eligible for initiating T/A FDC were included. The primary endpoint was to assess the change in the SBP from baseline to week 8. Ethics Committee approval and Informed consent were obtained. **Results:** A total of 5363 evaluable patients were included for analysis with a mean (SD) age of 57.02 (12.08) years, of whom 53.46% were male. The mean (SD) body weight was 74.17 (14.22) kgs and BMI was 26.17 (3.59) kg/m^2. At baseline, the mean (SD) SBP in mmHg was 155.12 (6.63), which showed a

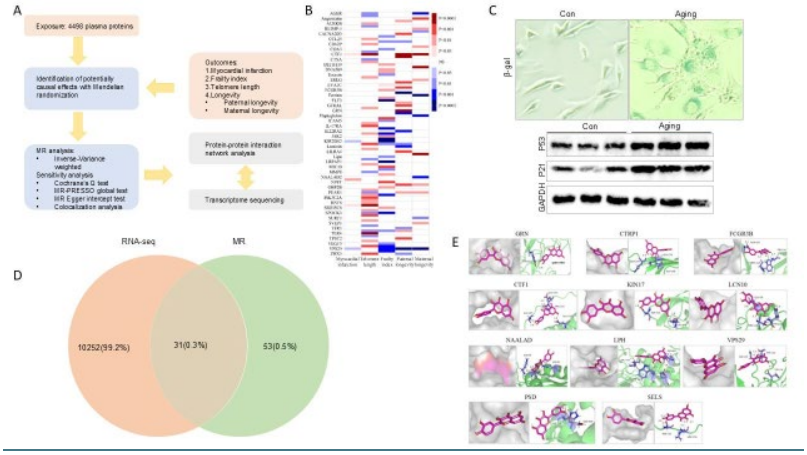
statistically significant reduction to 135.96 (6.77) by the end of the study. Similarly, the mean (SD) DBP decreased from 104.47 (6.69) to 88.45 (1.70). Amongst participants, 69.98% achieved target blood pressure <140/90 mmHg. T2DM (72.47%) was a common co-morbidity followed by dyslipidaemia (19.53%). Metformin was the most prescribed concomitant medication, followed by Sulfonylureas and DPP4 inhibitors. There were five reported adverse events (all mild in severity).

Conclusion: Results demonstrated that T/A FDC effectively reduced the SBP/DBP, the majority of study participants achieved the target BP goal and was well-tolerated in the Indian Hypertensive Patients.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	43
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EXPLORING THE ROLE OF CIRCULATING PROTEINS IN AGING RELATED DISEASE AND TRAITS INCLUDING MYOCARDIAL INFARCTION, TELOMERE LENGTH, FRAILTY INDEX AND PARENTAL LONGEVITY
Author Block:	Linghuan Wang, Zhiyi Fang, Tingting Lu, Sijia Chen, Yingjie Zhang, Tianhu Wang, Feng Cao, Chinese PLA General Hospital, Beijing, China, Nankai University, Tianjin
Abstract Body:	**Background:** This study aims to uncover the causal relationships between plasma proteins and aging-related cardiovascular diseases and traits, including myocardial infarction (MI), telomere length (TL), frailty index (FI), and lifespan. **Methods:** A genome-wide association study analyzed 4498 plasma proteins, focusing on MI, TL, FI, and lifespan. Transcriptome sequencing was performed to explore cellular senescence mechanisms. (Fig. A) **Results:** This study examined 4498 plasma proteins and identified 117 significant associations (P<0.05), including 5 proteins linked to MI, 38 to TL, 34 to FI, 23 to paternal longevity, and 17 to maternal longevity (Fig. B). Key proteins with causal associations were identified for each phenotype: CTF1, SELS, KIR2DS2, VPS29, and NAGAT for MI; LCN10, LPH, PSD1, SELS, and CTF1 for TL; FCGR3B, KIN17, and VPS29 for FI; GRN, CTRP1, and CTF1 for paternal longevity; and NAALAD2 and CTF1 for maternal longevity (P<0.05). A doxorubicin-induced vascular smooth muscle cell senescence model was established, confirmed by P21, P53, and β-gal staining (Fig. C). mRNA sequencing identified 3,123 differentially expressed genes, with 31 overlapping proteins identified through MR analysis (Fig. D). Molecular docking of quercetin with various proteins identified potential anti-aging targets for further

investigation (Fig. E).

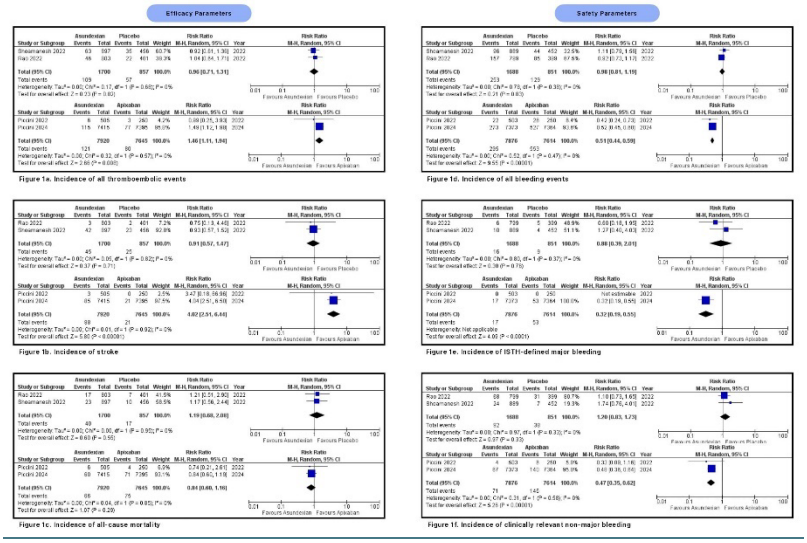
Conclusion: Our study provides new evidence linking the identified proteins to aging-related traits, suggesting their potential as valuable biomarkers.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	44
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EFFICACY AND SAFETY OF ASUNDEXIAN, A NOVEL FACTOR XIA INHIBITOR, IN PREVENTING THROMBOEMBOLIC EVENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Jaideep Menda, Ratnadeep Biswas, Abhay A. Kapoor, Vishnu Ojha, Gurleen Kaur, Vraj JigarKumar Rangrej, Swaminathan Ramasubramanian, Preet Doshi, Ankur Singla, Palak Patel, Grant W. Reed, All India Institute of Medical Sciences, Delhi, India, All India Institute of Medical Sciences, Patna, India
Abstract Body:	**Background:** Asundexian, a novel oral Factor XIa inhibitor, has gained attention for preventing thromboembolic events in cardiovascular conditions, though recent trials show mixed results. This meta-analysis evaluates its efficacy and safety. **Methods:** A comprehensive search across multiple databases through September 2024 identified 8 studies for inclusion—4 secondary analyses and 4 primary trials in the meta-analysis. **Results:** For efficacy, Asundexian showed a non-significant reduction in thromboembolic events compared to placebo (RR: 0.96, 95% CI: [0.71, 1.31]), but a significantly higher risk compared to Apixaban (RR: 1.46, 95% CI: [1.11, 1.94]). Stroke risk was higher with Asundexian than with Apixaban (RR: 4.02, 95% CI: [2.51, 6.44]). All-cause mortality was comparable between Asundexian and placebo(RR: 1.19, 95% CI: [0.68-2.08]) and between Asundexian and Apixaban (RR: 0.84, 95% CI: [0.60-1.16]). Regarding safety, Asundexian had similar bleeding risks to placebo (RR: 0.98, 95% CI: [0.81, 1.19]) but significantly lower bleeding risks compared to Apixaban (RR: 0.51, 95% CI: [0.44, 0.59]), including majorbleeding (RR: 0.32, 95% CI: [0.19, 0.55]) and clinically relevant non-major bleeding (RR: 0.47, 95% CI:[0.35, 0.62]) [Fig

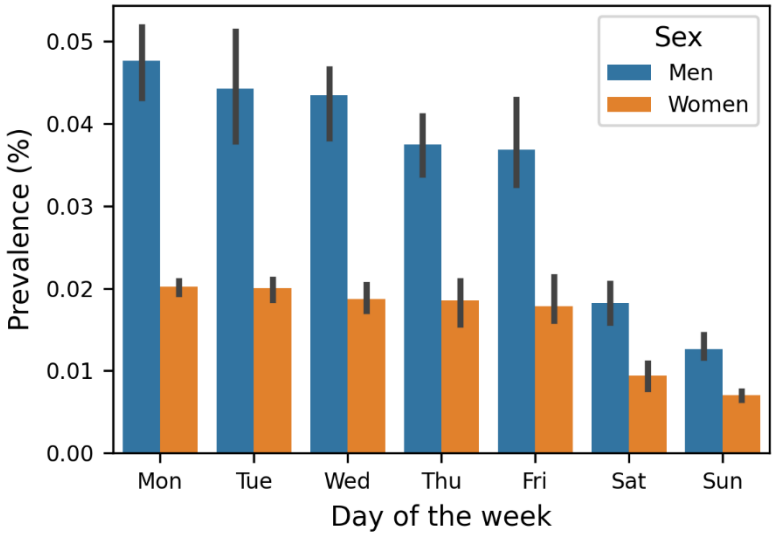
1].

Conclusion: While Asundexian was associated with less bleeding compared to Apixaban, it had a higher incidence of stroke and thromboembolic events, indicating it is less effective as an anticoagulant. Further studies are needed to confirm these findings.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	45
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CHRONOBIOLOGICAL PATTERNS IN ACUTE AORTIC DISSECTION WITHIN A SUPER-AGING SOCIETY: NEW INSIGHTS FROM BIG DATA
Author Block:	Mari Yao, Shigeki Aoki, Shuko Nojiri, Yuji Nishizaki, Takuya Uematsu, Manabu Iwasaki, Masashi Nagao, Muneaki Ishijima, Juntendo University Graduate School of Medicine, Tokyo, Japan
Abstract Body:	**Background:** Acute aortic dissection (AAD) is one of the most significant diseases with high fatality rates. Its epidemiological trends in societies with long life expectancies should be reviewed. **Methods:** We analyzed an administrative claims database of individuals aged 60 and above, sourced from various health insurance policies under Japan's universal health insurance system. Patients with AAD diagnosed between 2019 and 2021 were included. Descriptive analyses explored the relationship between AAD prevalence and day, month, season, age, and sex. **Results:** The analysis revealed a weekly prevalence difference by sex. Both men and women had significantly higher prevalence on weekdays than weekends; however, men (150%) showed a greater weekday/weekend difference than women (100%). AAD prevalence increased in winter, decreased in summer, and spiked in June 2020 during the COVID-19 spread. The highest prevalence was observed in men aged 80-85 and women aged 90+. **Conclusion:** This suggests that modern and social factors, such as increased elderly employment and pandemic stress, impact disease risk. These results challenge the traditional views and emphasize the integration of chronobiological perspectives into epidemiological research, especially in

aging populations.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	46
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE UNUSUAL SUSPECTS: MULTI DRUG RESISTANT *ESCHERICHIA COLI* CAUSING BILATERAL INFECTIVE ENDOCARDITIS COMPLICATING AN ATRIAL SEPTAL DEFECT
Author Block:	Rupendra Saha, Bhanu Duggal, Raghuraj Chawla, AIIMS RISHIKESH, Rishikesh, India

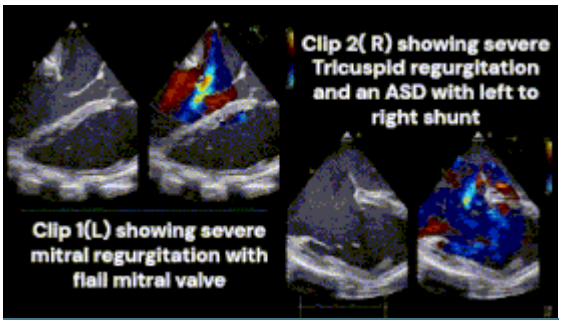
Abstract Body:

Background: Although congenital heart defects account for a significant fraction of infectious endocarditis, the atrial septal defect is sometimes mistaken as having a low risk due to low shunt velocity and low pressure through right-sided valves.

Case: We are presenting a 34-year-old male who presented with symptoms of new-onset heart failure with a history of fever which was diagnosed to have bilateral mitral and tricuspid valvular infective endocarditis with multi-drug-resistant Escherichia coli in a previously undiagnosed Atrial septal defect lesion. He was symptomatically better after prolonged antibiotic therapy following endocarditis protocol with renal replacement therapy.

Decision-making: The bacteria isolated were sensitive only to Gentamicin and immediately sensitive to colistin. In our case, the source of disseminated Escherichia coli sepsis was provisionally thought to be urosepsis as such severe involvement of kidneys and derangement of the renal function was seen without much hypotension despite urine cultures being sterile

Conclusion: ASD is only considered a moderate risk for infective endocarditis and thus traditionally doesn't warrant prophylaxis before dental procedures, which might not be true for all cases Escherichia coli species are increasingly gaining multi-drug resistance and can present with severe septicaemia and infective endocarditis with multiple complications


Clip 2(R) showing severe Tricuspid regurgitation and an ASD with left to right shunt
Clip 1(L) showing severe mitral regurgitation with flail mitral valve

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	47
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	LEVERAGING DIRECT LEFT VENTRICULAR PARAMETERS AND MULTI-OMICS PHENOTYPES TO IMPROVE CARDIOVASCULAR DISEASE PREDICTION MODELS
Author Block:	Chang Liu, peiqi liu, Zhi Lv, Dengfeng Gao, The Second Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China

Abstract Body:

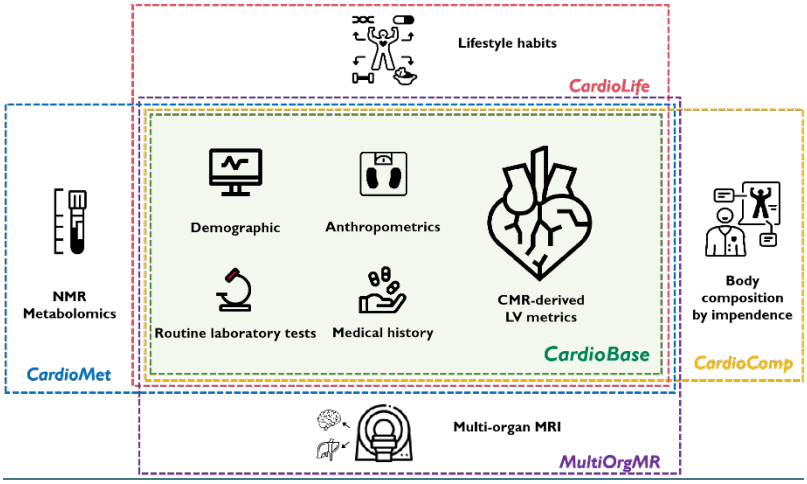
Background: Our previous research showed that incorporating direct left ventricular (LV) parameters with traditional risk factors improves cardiovascular disease (CVD) prediction. Whether adding extra-cardiac phenotypes from various omics can further enhance model performance remains unclear.

Methods: We excluded participants with prior CVDs and manually extracted 17 LV phenotypes from CMR images of 3,678 healthy UK Biobank participants. Using XGBoost, we developed the CardioBase model by integrating LV parameters with traditional cardiovascular risk factors and lab tests. Additional models included extra-cardiac phenotypes from lifestyle, body composition, metabolomics, and radiomics. SHAP ranked feature importance and stratified individuals. External validation was performed using the UK Biobank cohort (n=13,397) with automatically extracted LV phenotypes.

Results: For composite CVD outcomes, CardioBase showed an area under the curve (AUC) of 0.805 in internal validation and 0.666 in external validation. Models with omic data had AUCs ranging from 0.753 to 0.804. SHAP analysis identified key predictors, such as LV mass-to-volume ratio, posterior wall thickness, and LV mass index. Kaplan-Meier curves showed that most events occurred in the highest SHAP quintile.

Conclusion: Incorporating direct LV phenotypes into traditional risk models

enhanced CVD prediction. Adding select cardiac extra-phenotypes further enhanced performance.



Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	48
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE IMPACT OF VITAMIN D DEFICIENCY ON LIPID PROFILE IN PATIENTS WITH CARDIOVASCULAR DISEASES
Author Block:	Nozimaxon Abdusamatova, Nargiza Nurillaeva, Abror Abdusamatov, Tashkent medical academy, Tashkent, Uzbekistan
Abstract Body:	**Background:** Vitamin D deficiency is prevalent globally and has been linked to various cardiovascular risk factors, including dyslipidemia. This study investigates the relationship between vitamin D levels and lipid profiles in patients with normal vitamin D levels and those with deficiency. **Methods:** A cohort of patients was divided into two groups based on vitamin D levels: normal (≥28 nmol/L) and deficient (<28 nmol/L). Lipid profile parameters, including total cholesterol, triglycerides, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), and very low-density lipoprotein cholesterol (VLDL-C), were assessed. Statistical analysis utilized two-sample t-tests and correlation analyses. **Results:** No significant differences were observed in lipid profile parameters between the two groups. However, in the vitamin D-deficient group, negative correlations were identified between vitamin D levels and total cholesterol, HDL-C (high-density lipoprotein cholesterol), and LDL-C (low-density lipoprotein cholesterol), indicating that lower vitamin D levels were associated with unfavorable lipid profiles. **Conclusion:** While no significant differences in lipid profiles were found between groups, the observed correlations suggest that vitamin D deficiency may negatively influence lipid metabolism. These findings emphasize the importance of monitoring vitamin D levels in patients with cardiovascular

diseases and underscore the need for further research to explore the mechanisms by which vitamin D affects lipid regulation.

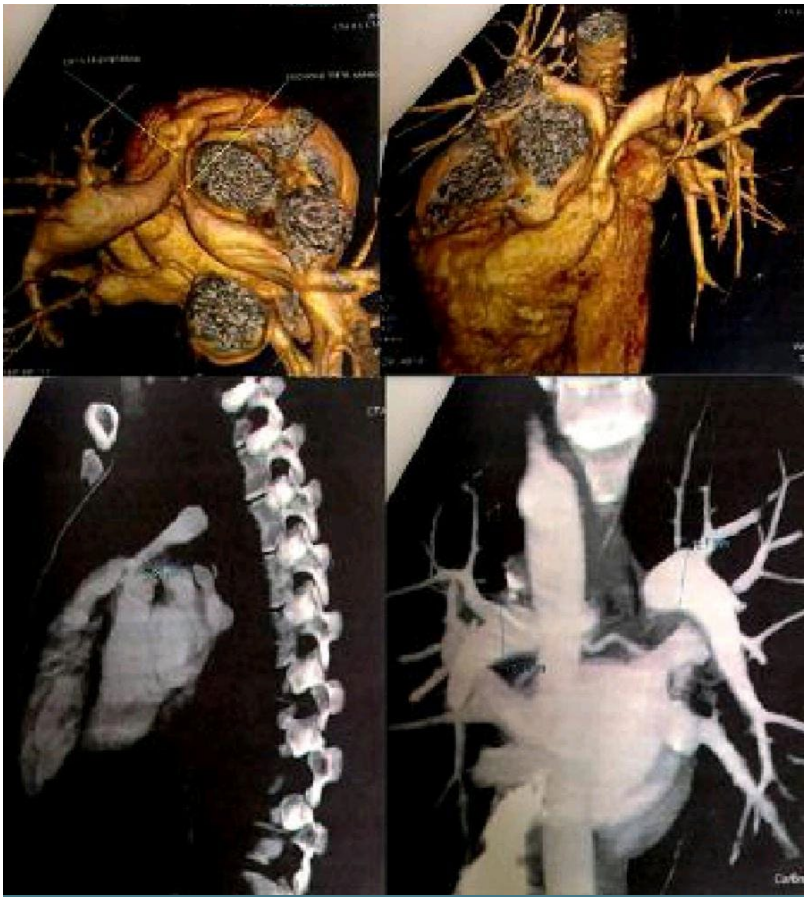
Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	49
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EXPLORATION OF THE MECHANISM BY WHICH GREEN TEA BIOACTIVE COMPOUND EGCG TARGETS SIRT1 TO ALLEVIATE VASCULAR AGING VIA AUTOPHAGY ACTIVATION AND FERROPTOSIS INHIBITION
Author Block:	Yingjie Zhang, Tianhu Wang, linghuan Wang, Feng Cao, Medical School of Chinese PLA, Beijing, China
Abstract Body:	**Background:** Aging has become a global public health challenge, with vascular aging, characterized by degenerative changes in blood vessels, being one of the major risk factors for cardiovascular diseases. **Methods:** In vitro: Human umbilical vein endothelial cells (HUVECs) were divided into four groups: control, DOX (doxorubicin, 2 μmol/L), DOX + EGCG (50 μmol/L), and DOX + EGCG + EX527 (SIRT1-specific inhibitor, 10 μmol/L). Cell viability, senescence (β-galactosidase staining), ROS levels, SIRT1 expression, and levels of proteins related to senescence, oxidative stress, autophagy, and ferroptosis were assessed using immunofluorescence and Western blot.In vivo: Male C57BL/6 mice were divided into Young (9 weeks), Aged (15 months), and Aged + EGCG groups. The Aged + EGCG group received intragastric EGCG (50 mg/kg/day) for 16 weeks, while others received saline. Pulse wave velocity (PWV), inflammatory cytokines (TNF-α, IL-6, IL-1β), and histological features of the aorta (H&E staining, Masson staining, and SIRT1 immunofluorescence) were analyzed. **Results:** In vitro: DOX significantly induced cellular senescence, evidenced by increased β-gal positivity, ROS levels, and P21/P53 expression, while antioxidant and ferroptosis-related proteins (Nrf2, HO-1, FTH, GPX4) were decreased ($p<0.05$). DOX also enhanced autophagy markers (P62, Beclin-1, LC3B) and reduced SIRT1 expression ($p<0.05$). EGCG reversed these

changes, reducing senescence and ROS levels, enhancing antioxidant activity, and promoting autophagy ($p<0.05$). Blocking SIRT1 with EX527 abolished the protective effects of EGCG, increasing ROS levels and reducing autophagy ($p<0.05$).In vivo: EGCG reduced vascular aging markers in aged mice, including lower PWV and inflammatory cytokines (TNF-α, IL-6, IL-1β) ($p<0.05$). Aortic histology revealed that EGCG mitigated intima-media thickening ($p<0.05$). SIRT1 expression in aged aortas was significantly upregulated by EGCG ($p<0.05$), supporting its role in alleviating vascular aging.

Conclusion: EGCG may alleviate vascular aging by targeting the upregulation of SIRT1 to activate autophagy and inhibit ferroptosis.

Session Title:	**Saturday Morning Poster Session**
Session Time:	Saturday, May 10, 2025, 8:30 am - 12:30 pm
Poster Board Number:	50
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	TOTAL CORRECTION OF STENOTIC AND HYPOPLASTIC MAIN PULMONARY ARTERY,RIGHT PULMONARY ARTERY, AND PULMONARY VALVE BY AUTOLOGOUS PATCH AUGMENTATION IN AN ADULT CASE OF TETRALOGY OF FALLOT
Author Block:	Muhammad Maaz Bin Zahid, Mujeeb -Ur- Rehman, Imad Ali, Peshawar Institute of Cardiology, Peshawar, Pakistan, Khyber Medical College, Peshawar, Pakistan
Abstract Body:	**Background:** Teratology of fallot (TOF) is a heart defect In which there are multiple anomalies in the heart, leading to cyanosis in childhood. Presence of hypoplastic main pulmonary artery, right pulmonary artery, and the pulmonary valve in TOF is a rare occurrence **Case:** A 16-year old girl came to the clinic with a known case of TOF. The patient didn't undergo correction of the defect in early childhood due to financial restrictions. The Computed Tomography (CT) angiogram of the patient showed athe defects related to TOF, along with hypoplasia and severe stenosis of main (diameter= 4.6mm) and right (diameter=2 mm) pulmonary arteries. The pulmonary valve was also hypoplastic. We used a new method for the correction of these pulmonary artery and valve pathologies. An Autologous Pericardial Patch (APP) and Bovine Pericardium (BP) was used to fix the defects. The concurrent TOF was also corrected. The post-operative profile of the patient is really good. **Decision-making:** Commonly used patches for valve or artery repair are polytetrafluoroethylene (PTFE) patch, and equine pericardium (EP) patch. According to many studies, these are associated with alot of recurrent surgeries. We used the APP and BP patches to add the benefits of using these patches to the existing literature

Conclusion: We conclude that APP and BP are reliable choice of patches for correction of severely defected arteries and valves. They are related to much less complications as compared to other options.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	01
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	PILOT STUDY OF A MULTI-MODAL IMAGING APPROACH USING ECHOCARDIOGRAPHY AND NOVEL HYBRID CARDIAC 18FLUORO-2-DEOXY-D-GLUCOSE (^{18}F-FDG) PET-CMR PROTOCOL TO IDENTIFY POTENTIAL EMBOLIC SOURCES IN PATIENTS WITH EMBOLIC STROKE OF UNDETERMINED SOURCE
Author Block:	En Ze Chan, Ching Hui Sia, Dalakoti Mayank, Pei Ing Ngam, Megan Bi Jia Ng, Mark Chan, William K. F. Kong, Kojodjojo Pipin, Shufen Zheng, Piotr Slomka, Evangelos Tzolos, Marc R Dweck, Leonard Yeo, Woon Loong Calvin Chin, Boon Chuan Benjamin Tan, National University Heart Centre, Singapore, Singapore
Abstract Body:	**Background:** Evaluation of the potential causes of embolic stroke of undetermined source (ESUS) is a clinical challenge. We hypothesize that a multi-modal approach using echocardiography and a novel hybrid ^{18}F-FDG positron-emission tomography and magnetic resonance imaging (PET-MRI) may be useful for evaluating these patients. We describe a pilot study utilizing this novel technique. **Methods:** Patients with ESUS were prospectively recruited within 30 days of the acute event. An implanted loop recorder (ILR) was implanted in all patients to detect atrial fibrillation(AF). Transthoracic echocardiography studies with strain analyses were performed. ^{18}F-FDG PET-MRI was performed to assess inflammation of the left atrium (LA), left ventricle (LV), aorta and presence of atrial fibrosis. For the PET analysis, maximum standardised uptake values (SUVmax) were recorded, and maximum tissue-to-background ratios (TBRmax) were calculated. **Results:** Out of 8 patients, 1 had poor quality PET images precluding analysis.

Three patients had AF-detected on ILR, and all 3 had reduced LA strain (mean 16.4±2.2%), and 2 had increased LA volume index (mean 44±9.1 ml/m2). There was no clear pattern of the increased 18F-FDG LA uptake observed. With regards to the other potential sources, the mean 18F-FDG LV in the non-AF group was higher than in the AF group (SUVmax 3.63±1.5 without AF; 2.27±0.33 with AF and TBRmax 3.63±1.5 without AF; 1.72±0.5 with AF). However, for the ascending aorta (AA), the mean 18F-FDG AA in the AF group was higher than in the non-AF group (SUVmax 2.46±0.29 without AF; 3.13±0.25 with AF and TBRmax 1.47±0.23 without AF; 1.94±0.19 with AF). All patients had normal LV ejection fraction (mean 60.83±2.7%) and 2 patients in the non-AF group had regional wall motion abnormalities. Presence of atrial fibrosis was identified on MRI in 4 patients, although there was no clear link to AF detected on ILR.

Conclusion: Patients with AF detected with an IRL had reduced LA strain. The 18F-FDG uptake in the LV was higher in the non-AF group. This hybrid imaging approach may have potential, and more data is needed.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	02
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	CHARACTERIZATION OF MYOCARDIAL STRAINTRAJECTORIES AND ITSVALUE OF PREDICTINGMYOCARDIAL FIBROSIS IN EARLY STAGE OF DUCHENNE MUSCULAR DYSTROPHY
Author Block:	Ting Xu, huayan xu, West China Second University Hospital, Sichuan University, Chengdu, China
Abstract Body:	**Background:** Duchenne muscular dystrophy (DMD) is a common X-linked recessive genetic disorder characterized by progressive muscle degeneration.DMD cardiomyopathy is a progressive condition marked by myocardial fibrosis.Myocardial fibrosis, assessed through Late Gadolinium Enhancement (LGE) on cardiac magnetic resonance imaging (CMR), is a key feature of DMD cardiomyopathy. The presence of LGE is closely associated with declining cardiac function and adverse clinical outcomes.The change of the dynamic trajectories of myocardial strain parameters is prior to the onset of LGE in early DMD cardiomyopathy.However,the relationship between dynamic changes in myocardial strain parameters and the occurrence of LGE in the early stages of DMD cardiomyopathy is unknown. This study aims to investigate the relationship between dynamic changes in myocardial strain parameters and the occurrence of LGE in the early stages of DMD cardiomyopathy. **Methods:** DMD patients will be followed up regularly to monitor dynamic changes in myocardial strain parameters and myocardial fibrosis assess (LGE) at baseline, 1 year, 2, 3 and 4 years.The primary endpoint of this study is the occurrence of LGE.Nonlinear mixed models will explore the myocardial strain trajectories, and Cox proportional hazards models will assess the impact of myocardial strain parameters on the risk of positive LGE.

Results: Nonlinear mixed-effects model analysis revealed significant differences in the trajectories of BCS and BRS between the two groups($P<0.05$).The changes in BCS and BRS were primarily localized to the subepicardial and midmyocardial segments,which corresponded to the distribution of myocardial fibrosis identified by LGE imaging.Cox regression analysis identified the cutoff value of 36.81 for BRS and cutoff value of -18.96 for BCS ,and survival curve analysis demonstrated significant differences in survival curves between the BRS groups at this cutoff($P<0.05$).
Conclusion: By characterizing the dynamic trajectories of myocardial strain parameters in early DMD cardiomyopathy, this study identify predictors of LGE and early detection of myocardial fibrosis, ultimately improving patient management.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	03
Topic 1:	Cardiac Arrhythmias
Publishing Title:	IMPACT OF PRE-EXISTING CARDIOVASCULAR DISEASES ON SEVERE MATERNAL MORBIDITY AND MORTALITY DURING DELIVERY IN PREGNANT WOMEN WITH ATRIAL FIBRILLATION
Author Block:	Tze Ern Ong, Desmond How Chiat Tan, Yong Hao Yeo, Boon Jian San, Min Choon Tan, Kamala P. Tamirisa, Nishaki Mehta, Corewell Health William Beaumont University Hospital, Detroit, MI, USA
Abstract Body:	**Background:** While the incidence of atrial fibrillation (AF) among pregnant women is increasing, the impact of pre-existing cardiovascular disease (CVD) on pregnant women with AF is not well-described in a large national database. **Methods:** We used the Nationwide Readmissions Database and included all pregnant women with AF (2017-2020). We categorized the cohort into two groups depending on the presence of pre-existing CVD. We assessed the risk of severe maternal morbidity and mortality (SMM) outcomes, as defined by the CDC, between pregnant women with AF alone and those with AF and pre-existing CVD. **Results:** Out of the total 2,348 pregnant women with AF, 348 (14.8%) had pre-existing CVD. 69 (19.8%) had mWHO I- II CVD, 150 (43.1%) had mWHO II/III-IV CVD, and 129 (37.1%) had CVD not classified in mWHO. Overall, those with pre-existing CVD had higher rates of SMM/death (28.2% vs. 11.1%, P<0.01), non-transfusion SMM/death (25.9% vs. 9.8%, P<0.01), and cardiac SMM/death (21.6% vs. 5.5%, P<0.01) than those with AF alone. After adjustment, those with pre-existing mWHO I- II CVD and AF were not associated with higher odds of SMM/death (aOR: 0.81, 95% CI: 0.34-1.92, P=0.64), non-transfusion SMM/death (aOR: 0.45, 95% CI: 0.14-1.46, P=0.18),

and cardiac SMM/death (aOR: 0.55, 95% CI: 0.13-2.30, P=0.41) than those with AF alone. Patients with pre-existing mWHO II/III- IV CVD and AF had higher odds of SMM/death (aOR: 7.21, 95% CI: 4.94-10.53, P<0.01), non-transfusion SMM/death (aOR: 7.38, 95% CI: 5.03-10.82, P<0.01), and cardiac SMM/death (aOR: 12.02, 95% CI: 7.99-18.10, P<0.01) than those with AF alone. Patients with pre-existing CVD not classified in mWHO and AF did not have higher odds of SMM/death (aOR: 1.64, 95% CI: 0.99-2.71, P=0.06) but had higher odds of non-transfusion SMM/death (aOR: 1.77, 95% CI: 1.06-2.97, P=0.03) and cardiac SMM/death (aOR: 1.96, 95% CI: 1.05-3.67, P=0.04).
Conclusion: Compared to pregnant women with AF alone, those with pre-existing mWHO II/III- IV CVD and AF were associated with worse SMM/death, non-transfusion SMM/death, and cardiac SMM/death. However, similar findings were not noted in those with pre-existing mWHO I- II CVD and AF pregnant women.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	04
Topic 1:	Cardiac Arrhythmias
Publishing Title:	PREDICTION OF ATRIAL FIBRILLATION POST CORONARY ARTERY BYPASS SURGERY USING TOTAL ATRIAL CONDUCTION TIME AND DEFORMATION ANALYSIS
Author Block:	Karthikeyan Thirunavukkarasu, Pankaj Banotra, naryana institute of cardiac science, bangalore, India

Abstract Body:

Background: Post CABG Atrial fibrillation (AF) is a common arrythmia ,which is associated with complications causing burden to patient and driving up the cost of healthcare.

Methods: This was an observational study conducted on patients admitted for elective coronary artery bypass grafting (CABG). A 2D transthoracic echocardiogram (TTE) was performed within one week prior to the planned surgery. Patients were followed up postoperatively until discharge.

Results: 89 patients were evaluated after CABG surgery. 28 patients (31.5%) developed postoperative AF(POAF), while 61 patients (68.5%) did not experience AF. Reservoir strain , Conduit strain , Contractile strain were significantly lower in the POAF group compared to no-POAF group , (25.8) compared to the no-POAF group (36.9) ($p < 0.001$), (13.5) compared to the no-POAF group (17.2) ($p = 0.029$), (13.8) compared to the no-POAF group (16.7) ($p = 0.043$) respectively. The PA-TDI duration was longer in the POAF group (98.8 ms) compared to the no-POAF group (84.4 ms) ($p < 0.001$). The left atrial volume index (LAVI) was significantly higher in the POAF group (27.2 ml/m^2) compared to the no-POAF group (21.2 ml/m^2) ($p = 0.001$). The receiver operating characteristic (ROC) analysis evaluated the performance of above-mentioned parameters in predicting POAF. The parameter with the highest area under the curve (AUC) was the PA-TDI, which demonstrated an AUC of 0.797 (95% CI: 0.690 to 0.903) with a cutoff value of >88.0. This parameter

exhibited a sensitivity of 82.1% and a specificity of 73.7%, with a statistically significant p-value of <0.001. Reservoir strain, conduit strain, and contractile strain were also significant predictors of POAF with AUC values of 0.614, 0.677, and 0.683, respectively. LAVI had an AUC of 0.711 with a sensitivity of 75.0% and specificity of 80.3% (p = 0.001)

Conclusion: Both Strain parameters and PA-TDI duration predicted the occurrence of Post CABG AF. PA -TDI duration predicted post CABG AF better among all and also with added advantage of being a simpler parameter to acquire

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	05
Topic 1:	Cardiac Arrhythmias
Publishing Title:	ATRIAL FIBRILLATION CATHETER ABLATION VERSUS MEDICAL TREATMENT IN THE PATIENTS WITH HERAT FAILURE WITH PRESERVED EJECTION FRACTION, A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Fatemeh Chichagi, Hoda Mombeini, Niyousha Shirsalimi, Kimiya Ghanbari Mardasi, Reyhaneh Alikhani, Mahboobeh Sheikh, Johns Hopkins university, Baltimore, MD, USA
Abstract Body:	**Background:** The best treatment for Atrial Fibrillation (AF) in Heart Failure with Preserved Ejection Fraction (HFpEF) is uncertain. This study evaluates the effectiveness of catheter ablation using a pooled analysis. **Methods:** We systematically searched PubMed/Medline, Web of Science, Embase, Clinicaltrials.gov, Cochrane, Scopus, and Google Scholar for studies on HFpEF patients with AF who underwent catheter ablation and analyzed the data using RStudio version 4.2.0. **Results:** A meta-analysis of 10 studies involving 19,032 participants found that catheter ablation, compared to medical therapy, reduced the risks of HF hospitalization (HR: 0.56, 95% CI: 0.31-0.80, I^2: 73%), all-cause mortality (HR: 0.60, 95% CI: 0.30-0.90, I^2: 65%), and their combination (HR: 0.62, 95% CI: 0.36-0.89, I^2: 84%). Additionally, the ablation group had reduced risks of all-cause hospitalization (HR: 0.83, 95% CI: 0.68-0.97, I^2: 42%), AF recurrence (HR: 0.45, 95% CI: 0.23-0.68, I^2: 94%), cardiovascular hospitalization (HR: 0.76, 95% CI: 0.55-1.01, I^2: 42%), and cardiovascular mortality (HR: 0.27, 95% CI: -0.06-0.61, I^2: 28%). Meta-regression indicated that the benefits of catheter ablation on all-cause mortality ($p<0.001$) and HF hospitalizations ($p=0.003$) increased with longer follow-up. Stroke/TIA were similar between the groups (HR: 0.73, 95% CI: 0.23-1.22, I^2: 0%).

Conclusion: Catheter ablation for AF in HFpEF patients lowers hospitalization and death risks, with greater benefits seen in long-term follow-ups.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	06
Topic 1:	Cardiac Arrhythmias
Publishing Title:	INSIGHTS INTO RISK STRATIFICATION AND PACEMAKER TIMING IN PD-1/PD-L1-ASSOCIATED MYOCARDITIS WITH THIRD-DEGREE ATRIOVENTRICULAR BLOCK
Author Block:	CHI ZHANG, Jiangying Luo, Ping Zhang, Beijing Tsinghua Changgung Hospital, School of Clinical Medicine, Tsinghua University, Beijing, China
Abstract Body:	**Background:** Immune checkpoint inhibitor (ICI) therapy can lead to uncommon but serious cardiovascular toxicities, such as myocarditis with associated third-degree atrioventricular block (AVB). Currently, no prospective studies or established guidelines exist to define optimal management strategies for this rare complication. Existing knowledge is primarily derived from case reports and small case series, which may offer preliminary insights to aid clinical decision-making in such scenarios. **Methods:** We reported a case of ICI-associated myocarditis with third-degree atrioventricular block and conducted a PubMed-based literature search for relevant reports published between January 2016 and January 2025. A total of 31 similar cases were identified, and key data were systematically summarized in table form. **Results:** A review of 31 published cases revealed that ICI-associated myocarditis with AVB predominantly affects males aged 60-70 years with comorbidities such as hypertension or diabetes. Non-small cell lung cancer and renal cell carcinoma were the most common malignancies, with PD-1 inhibitors frequently implicated. Severe arrhythmias peaked within 0-7 and 15-30 days post-ICI initiation, and pacemaker implantation decisions are often made early in the treatment course. Our case also provides a reference for the timing window of permanent pacemaker implantation in such

patients.
Conclusion: Our study underscores the importance of multidisciplinary care and timely intervention in ICI-associated myocarditis with conduction disturbances, offering practical insights into pacemaker implantation in such rare scenarios.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	08
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	ACUTE SEVERE ISCHEMIC MITRAL REGURGITATION RESOLVED BY SUCCESSFUL ANGIOPLASTY OF A NON-DOMINANT VESSEL
Author Block:	Gaurav Kishor Surana, Dr Chandrashekhar Tulasigeri, Dr Nishant Tavade, NEW ERA HOSPITAL, VASHI, NAVI MUMBAI, India
Abstract Body:	**Background:** MITRAL REGURGITATION (MR) AFTER ACUTE MYOCARDIAL INFARCTION (AMI) HAS A VERY POOR PROGNOSIS AND IS GENERALLY TREATED BY SURGERY WHICH IN ITSELF HAS HIGHER MORTALITY RATE. THE PREDICTOR OF IMPROVEMENT IN ACUTE ISCHEMIC MR IS A SHORT TIME FROM THE ONSET TO REPERFUSION AND NON-TOTAL CORONARY ARTERY OCCLUSION BEFORE ANGIOPLASTY. **Case:** 52-YEAR DIABETIC MALE PRESENTED WITH DYSPNEA CLASS IV. ECG HAD VENTRICULAR TACHYCARDIA, GIVEN 200 J DC SHOCK, REVERTED TO ATRIAL FIBRILLATION WITH FAST VENTRICULAR RATE. ECHO REVEALED GLOBAL LV HYPOKINESIA WITH EF OF 25-30 % WITH SEVERE MR AND PAH. PATIENT WAS IN CARDIOGENIC SHOCK AND PULMONARY EDEMA. PATIENT WAS GIVEN LOADING DOSE AND KEPT ON NONINVASIVE VENTILATION WITH DUAL INOTROPIC SUPPORT, FUROSEMIDE AND AMIODARONE INFUSION. AS PATIENT WAS NOT ABLE TO LIE SUPINE, PATIENT WAS INTUBATED AND TAKEN FOR CORONARY ANGIOGRAPHY WHICH REVEALED A NON-DOMINANT LEFT CIRCUMFLEX ARTERY (LCX) TOTAL OCCLUSION JUST AFTER OSTIUM. AS CABG PLUS MVR WAS VERY HIGH RISK, PLAN OF PTCA TO LCX WAS DECIDED. HE WAS EXTUBATED ON 4TH DAY, SYMPTOMATICALLY BETTER, ECG HAD SINUS RHYTHM AND ECHO HAD MILD MR WITH EF OF 45-50%. **Decision-making:** THE TOTAL OCCLUSION OF LCX MIGHT HAVE RESULTED

IN INFERO-POSTERIOR ISCHEMIA WITH SUBSEQUENT RETRACTION OF THE POSTERIOR MITRAL LEAFLET PRODUCING ISCHEMIC MITRAL REGURGITATION. MOREOVER, DC SHOCK CAUSED STUNNING AND LV DILATION, RESULTING LACK OF COAPTATION OF MITRAL LEAFLETS LEADING TO SEVERE REGURGITATION. THE RESOLUTION OF THE PROCESS AFTER ANGIOPLASTY IMPROVED THE SEGMENTAL ALTERATIONS AND RESOLVED THE MITRAL REGURGITATION.

Conclusion: EVEN A NON-DOMINANT LEFT CIRCUMFLEX ARTERY CAN LEAD TO SEVERE ISCHEMIC MR AND A TRIAL OF ANGIOPLASTY SHOULD BE GIVEN TO AVOID A HIGH-RISK SURGERY WITH VERY HIGH MORTALITY RATE.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	09
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	INTRAMYOCARDIAL DISSECTING HEMATOMA: A RARE COMPLICATION OF MYOCARDIAL INFARCTION
Author Block:	Dinesh Choudhary, Priyanshu Soni, Sunil Kumar Budania, Pintu Nahata, SR, R.G Kumawat, Yudhisthir Yadav, Gaurav Gupta, Sardar Patel Medical College, Bikaner, India
Abstract Body:	**Background:** Intramyocardial dissecting hematoma (IDH) is a rare but potentially life-threatening complication of transmural myocardial infarction. It arises due to rupture of intramyocardial vessels, often following reperfusion, and can lead to significant morbidity or mortality. **Case:** A 61-year-old male presented with dyspnea on exertion for three months and new-onset chest and back pain for two days. ECG showed QS complexes in lead III and aVF, and troponin I was positive. Angiography revealed triple vessel disease, and the patient underwent angioplasty with stent placement in the RCA and LAD. Subsequently, he developed dyspnea, and echocardiography revealed a hypoechoic area in the anterior RV wall, consistent with IDH. He later developed pericardial tamponade managed by pericardiocentesis. Conservative management was chosen due to high surgical risk and patient preference. Repeat echocardiography a month later showed resolution of the hematoma. **Decision-making:** IDH is a rare myocardial rupture variant characterized by intramyocardial dissection. Echocardiography plays a key role in diagnosis. Management options include conservative care or surgical repair, depending on hemodynamic stability and progression. **Conclusion:** IDH requires prompt recognition and individualized management. This case highlights the role of echocardiography in diagnosis and potential for

favorable outcomes with conservative treatment.

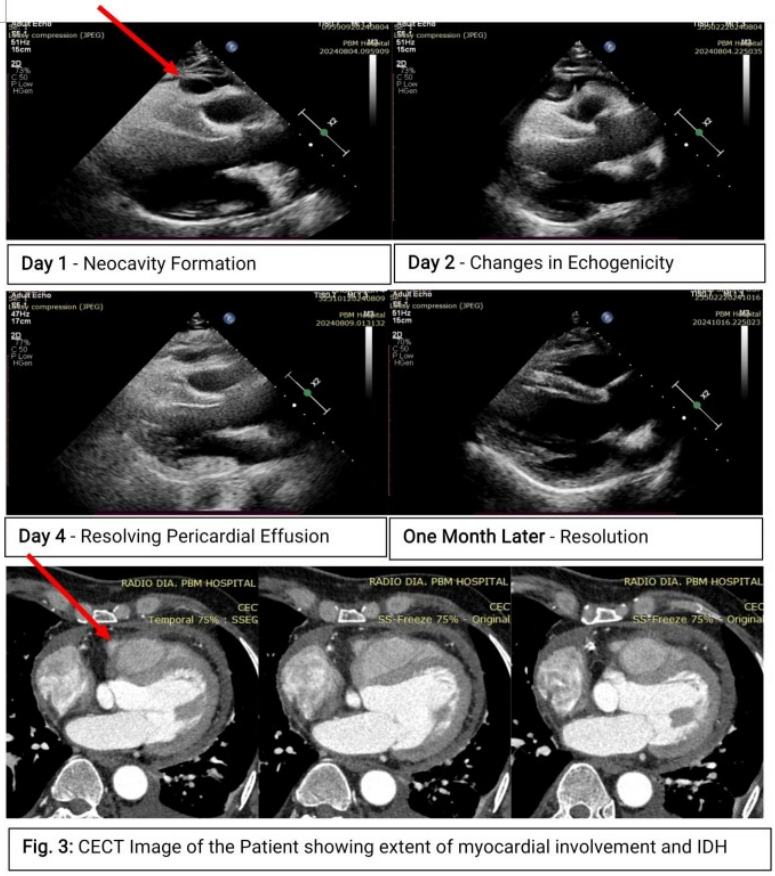


Fig. 3: CECT Image of the Patient showing extent of myocardial involvement and IDH

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	10
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	OPTIMAL TIMING OF INVASIVE CORONARY ANGIOGRAPHY AFTER THROMBOLYSIS IN STEMI PATIENTS: A RETROSPECTIVE COHORT STUDY FROM THE NATIONAL CHEST PAIN CENTER PROGRAM IN CHINA
Author Block:	Siwen Li, Yinzi Jin, Department of Global Health, School of Public Health, Peking University, Beijing, China
Abstract Body:	**Background:** The optimal timing of invasive coronary angiography and its impact on clinical outcomes in STEMI patients following successful thrombolysis remains unclear. **Methods:** This retrospective cohort study utilized data from the National Chest Pain Center Program of China. The study included STEMI patients who underwent thrombolysis alone and were clinically assessed for vascular recanalization from 2016 to 2022. Outcomes included TIMI grade 0-2 flow, PCI after thrombolysis, in-hospital mortality, and length of hospital stay. Patients were categorized based on the time from thrombolysis to angiography: 2-6 hours, 6-12 hours, 12-18 hours, and 18-24 hours. **Results:** Among 8,232 patients, the 2-6 hours group had higher rates of TIMI 0-2 flow (32.74% vs. 23.42%), PCI after thrombolysis (55.68% vs. 44.82%), mortality (1.65% vs. 0.45%), and longer hospital stay compared with the 18-24 hours group. Increased risks in the 2-6 hours group for TIMI 0-2 flow (OR: 1.59, 95% CI: 1.38-1.84), PCI after thrombolysis (OR: 1.39, 95% CI: 1.12-1.71), Mortality (OR: 4.27, 95% CI: 1.51-5.07), Prolonged hospital stay (OR: 0.61, 95% CI: 0.46-0.80). Patients who were female, hypertension, coronary artery disease, and obesity were more likely to have TIMI grade 0-2 flow, undergo PCI after thrombolysis, experience in-hospital mortality, and require prolonged hospitalization compared with other patients. **Conclusion:** STEMI patients who were treated with thrombolysis, earlier

invasive coronary angiography was associated with higher risks of adverse outcomes compared with delayed angiography. Because the study was based on a prospective registry, the results should be considered hypothesis-generating, highlighting the need for further research, particularly in high-risk subgroups.

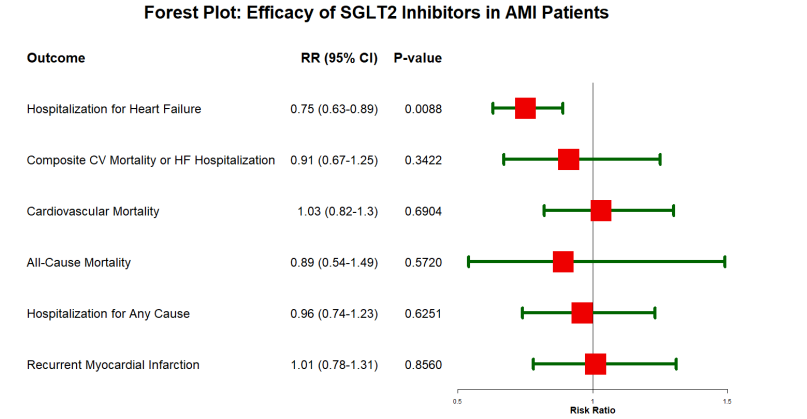
Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	11
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	THE SILENT SUFFERING
Author Block:	K.H. Srinivas, B.C. Srinivas, Dr. Babureddy T.S., TANYA BATRA, Nishanth K.R., Vijay Kumar, Anusha Buchade, Suhas Raj, sri jayadeva institute of cardiovascular sciences and research, bengaluru, India
Abstract Body:	**Background:** Chronic venous insufficiency (CVI) as an advanced stage of chronic venous disease is a common problem that occurs in approximately 1-5 % of the adult population. **Case:** 40 year old male with history of non healing ulcer involving right lower limb followed by left lower limb since 2 years .Bilateral lower limb venous doppler : chronic partial thrombosis in bilateral SFV and 80-90% recanalisation in right popliteal vein and 30-40% recanalisation in left popliteal vein.CT venogram : chronic thrombosis of infrahepatic segment of IVC - slit like , thin with no contrast enhancement with multiple collaterals. **Decision-making:** Peripheral angiogram done suggestive of total occlusion of IVC with left common iliac vein partially recanalised and right common iliac vein patent , attempted to cross the wire into the true lumen from bilateral femoral vein access. Right IJV access taken and straight termu wire manipulated to create a veno venous loop.After adequate predilation of the IVC, self expanding stent along with bilateral common iliac vein confluence stenting done with good antegrade flow. **Conclusion:** Recanalization and stenting of chronic deep venous obstructions is a minimally invasive intervention that has proven effective and safe over the last decades.It provides excellent long-term results with respect to target vessel revascularization as well as symptom relief, therefore improving the

quality of life.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	13
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	EFFICACY AND SAFETY OF SODIUM-GLUCOSE COTRANSPORTER-2 INHIBITORS (SGLT2I) IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION (AMI): A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS
Author Block:	Ibrahim Khalil, M Rafiqul Islam, Arindam Das Joy, Durjoy Acharjee, Sakib Abrar, Md. Rezwanul Islam Raz, Umme Habiba, Raihan Kabir, Zahin Zeima, Mahamudul Hasan Yusuf, Sunjida Amin Promi, Md Abu Sayed, Ta-Seen Bin Jamil, Suborna Biswas, Sumaya Khan Mifty, Malaika Taseen, Avijit Debnath, Ali Saad Al-Shammari, Sajjad Ghanim Al-Badri, Md. Imran Hossain, Dhaka Medical College and Hospital, Dhaka, Bangladesh, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh
Abstract Body:	**Background:** Sodium-glucose cotransporter-2 inhibitors (SGLT2i) are promising agents for cardiovascular management. This study evaluates their efficacy and safety in acute myocardial infarction (AMI) patients. **Methods:** A systematic search adhering to PRISMA guidelines across PubMed, Cochrane Library, Embase, and Scopus identified 1246 studies, with 8 randomized controlled trials (RCTs) meeting inclusion criteria. A random-effects model calculated risk ratios (RRs) with 95% confidence intervals (CIs), considering p-values <0.05 statistically significant. **Results:** A total of 14,487 patients were included (6,785 in the SGLT2i arm, 7,702 in the control arm). SGLT2i significantly reduced hospitalization for heart failure (RR = 0.75, 95% CI [0.63, 0.89], p = 0.0088). However, no statistically significant reductions were observed for other outcomes, including composite cardiovascular mortality or heart failure hospitalization (RR = 0.91, 95% CI [0.67, 1.25], p = 0.3422), cardiovascular mortality (RR = 1.03, 95% CI [0.82,

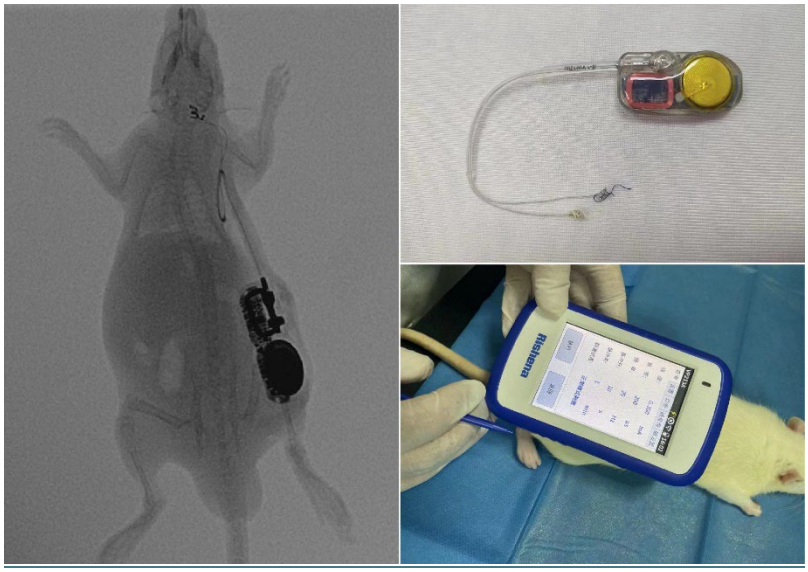
1.30], p = 0.6904), all-cause mortality (RR = 0.89, 95% CI [0.54, 1.49], p = 0.5720), hospitalization for any cause (RR = 0.96, 95% CI [0.74, 1.23], p = 0.6251), or recurrent myocardial infarction (RR = 1.01, 95% CI [0.78, 1.31], p = 0.8560).

Conclusion: SGLT2i significantly reduces heart failure hospitalizations in AMI patients, underscoring their potential benefit. However, their effects on other cardiovascular and mortality outcomes remain inconclusive.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	14
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	VAGUS NERVE STIMULATION PRETREATMENT FOR CARDIOPROTECTION: MITIGATING ISCHEMIA-REPERFUSION INJURY AND ARRHYTHMIC RISK
Author Block:	Hu Feng, Minhua Zang, Guangyu Wang, Guangyu Li, Jun Pu, Department of Cardiology, Renji Hospital, School of Medicine, Shanghai Jiaotong University, Shanghai, China
Abstract Body:	**Background:** Vagus nerve stimulation (VNS) shows cardioprotective potential in acute myocardial infarction (AMI) and ischemia-reperfusion (I/R) injury, but its role in preconditioning against I/R injury requires further study. **Methods:** Sixty SD rats were divided into three groups: Pre-VNS, Control, and Sham. The I/R model was induced by occluding the LAD for 30 minutes, followed by reperfusion. VNS was applied one week prior (Figure 1). Outcomes included survival rates, echocardiographic function, reperfusion arrhythmias, myocardial infarct size, cardiomyocyte apoptosis, and inflammatory cytokines IL-1β, IL-6, and TNF-α. **Results:** The Pre-VNS group had higher 24-hour survival (75.0% vs. 65.0%, $P = 0.0238$). Echocardiography showed better cardiac function, with higher ejection fraction (45.10% vs. 36.30%, $P = 0.007$) and fractional shortening (32.70% vs. 23.40%, $P < 0.001$). Reperfusion arrhythmias were lower (30.0% vs. 70.0%, $P < 0.001$) with reduced duration and inducibility ($P < 0.001$). Infarct size was smaller (14.60% vs. 25.30%, $P < 0.001$), apoptosis lower (9.60% vs. 21.40%, $P < 0.01$), and serum cytokines IL-1β (134.30 vs. 178.50 pg/mL, $P < 0.001$), IL-6 (263.30 vs. 408.50 pg/mL, $P < 0.001$), and TNF-α (313.27 vs. 416.10 pg/mL, $P < 0.001$) were reduced. **Conclusion:** VNS pretreatment significantly reduces I/R injury, improving cardiac function, reducing infarct size and arrhythmias, and decreasing

inflammatory and apoptotic responses.

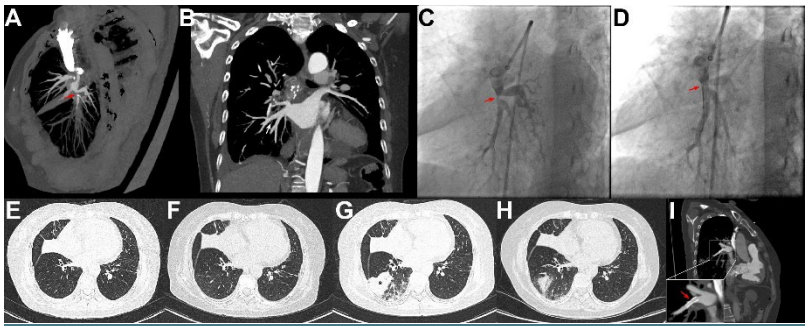


Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	15
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	DELAYED LUNG INJURY AFTER STENT IMPLANTATION FOR PULMONARY ARTERY STENOSIS CAUSED BY FIBROSING MEDIASTINITIS - A CASE REPORT
Author Block:	Junhao Jin, Yao Mi, Hongling Su, Yunshan Cao, Lanzhou University, Lanzhou, China, Sichuan Provincial People's Hospital, Chengdu, China

Abstract Body:

Background: Lung injury (LI) following percutaneous transluminal pulmonary angioplasty (PTPA) has been predominantly reported within 24 h of the procedure in chronic thromboembolic pulmonary hypertension (CTEPH).
Case: A 69-year-old woman was admitted for the second PTPA with a history of fibrosing mediastinitis (FM) and stent implantation of the left inferior pulmonary artery (PA). Computed tomography pulmonary angiography (CTPA) indicated right inferior PA stenosis and normal right inferior pulmonary vein. A stent (5 mm × 19 mm, 10 atm) was then implanted in the 90% stenosis of the right inferior PA, and the pressure drop across the stenosis decreased by 65 mm Hg. Chest CT before and 24 h after PTPA did not show pulmonary exudation. Thirty-six hours after PTPA, this patient immediately coughed up pink frothy sputum, and oxygen saturation dropped to 87%.
Decision-making: The patient's symptoms were gradually alleviated after diuretics and oxygen therapy. Chest CT then confirmed the exudation of the region supplied by the PA receiving intervention, which was significantly improved 92 h after PTPA, and CTPA did not show filling defects within the stent. The PA stenosis was completely relieved after stent implantation, and such an "all-or-nothing" change and the significant decrease in trans-stenotic pressure gradient potentially caused the LI in this case.
Conclusion: In conclusion, a delayed LI after PTPA in a patient with FM was

reported, indicating the importance of dynamic perioperative monitoring.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	16
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	PROSPECTIVE EVALUATION OF LIPOPROTEIN(A) LEVELS AND THEIR ASSOCIATION WITH MYOCARDIAL INFARCTION IN YOUNG ADULTS (<30 YEARS) WITH AND WITHOUT CONVENTIONAL CARDIOVASCULAR RISK FACTORS
Author Block:	Pranesh Samiappan, Nambirajan Jeyabalan, COIMBATORE MEDICAL COLLEGE, COIMBATORE, India
Abstract Body:	**Background:** Young-onset myocardial infarction (MI), especially in those without conventional risk factors, is a rising concern. This prospective study investigates the role of elevated lipoprotein(a) [Lp(a)] in the development and subtypes of MI (STEMI, NSTEMI, unstable angina) over a three-year follow-up, stratified by risk factor status. **Methods:** This prospective cohort study of 200 patients aged ≤30 years with acute MI (2022-2025) at Coimbatore Medical College classified cases into STEMI (n=120), NSTEMI (n=50), and unstable angina (n=30). Patients were grouped by the presence or absence of conventional risk factors, with Lp(a) levels measured via ELISA. Follow-up assessed recurrent cardiovascular events, with multivariate analysis evaluating the association of elevated Lp(a) with MI subtypes. **Results:** Among 200 MI patients ≤30 years, 60% had conventional risk factors, while 40% did not. STEMI was predominant in those with risk factors (75%), whereas NSTEMI (40%) and unstable angina (25%) were more common without risk factors. Elevated Lp(a) (>30 mg/dL) was observed in 55% with and 72% without risk factors. Elevated Lp(a) significantly correlated with recurrent MI (16% overall, $p<0.01$), with the highest recurrence in STEMI patients (70%). Multivariate analysis confirmed elevated Lp(a) as an

independent predictor of recurrent MI, especially in those without risk factors (OR 3.5, 95% CI 1.9-6.1, p<0.01).
Conclusion: Elevated Lp(a) levels are strongly associated with MI and recurrent events in young adults, particularly those without conventional risk factors. Lp(a) may serve as a key biomarker for early risk stratification and targeted management in this population.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	17
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	EVALUATION OF MYOCARDIAL STRUCTURE BY NATIVE T1-MAPPING IN PATIENTS WITH CORONARY HEART DISEASE
Author Block:	Julia Shalaginova, Olga Stukalova, Roman Shakhnovich, Dmitry Pevzner, Sergey Ternovoy, National Medical Research Center for Cardiology named after academician Y. Chazov, Moscow, Russian Federation
Abstract Body:	**Background:** Purpose is evaluation of the possibility of non-contrast CMR (cardiac magnetic resonance) - T1-mapping in comparison with delayed-enhanced CMR in the detection of MI in the acute and chronic stages. **Methods:** 36 patients with revascularized STEMI and 26 patients with chronic MI underwent CMR with native T1-mapping at 3-7 days from disease onset (Siemens Magnetom Aera, 1.5T). We used the modified MOLLI 5(3)3 sequence. Data were analyzed on a Siemens workstation by a semi-quantitative method. We used the fibrosis/necrosis index to assess the extent and degree of myocardial injury. **Results:** 612 segments were analyzed in the STEMI group, and gadolinium accumulation was found in 170. The sensitivity and specificity of native T1-mapping in detecting myocardial damage were 86.5% and 90.3%, respectively. Detection of acute MI on native T1-maps is possible at T1 equal to 1126.55 ms or more with sensitivity and specificity of 81.8% and 78.5%, respectively (AUC 0.826, 95% CI: 0.785-0.867, $p < 0.0001$). 442 segments were analyzed in the group of patients with chronic MI, and gadolinium accumulation was found in 126. The sensitivity and specificity of native T1-mapping in detecting myocardial damage in patients with chronic MI were 65.0% and 97.4%, respectively. For scar diagnostics, we calculated a cut-off value of 1092.38 ms (AUC 0.743, 95% CI: 0.689-0.798, $p < 0.0001$). Sensitivity

and specificity of native T1-mapping were 50,0% and 89,2%, respectively. The T1-relaxation time of 1147.79 ms can distinguish between acute and chronic stages of MI with a sensitivity and specificity of 74.7% and 84.1%, respectively (AUC 0.819, 95% CI: 0.772-0.866, $p < 0.001$).
Conclusion: Native T1-mapping may be useful in patients with severe chronic kidney disease and gadolinium allergy when diagnosing acute MI and may also differentiate acute necrosis from scar.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	18
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	SERIAL ECG CHANGES IN LBB AREA PACING AND STEMI
Author Block:	Partha Pritom Saha Roy, David Chase, Sofian Johar, Ezam Emran, Hospital RIPAS, bandar seri begawan, Brunei Darussalam

Abstract Body:

Background: Left bundle branch (LBB) pacing is currently the preferred treatment modality where significant ventricular pacing is expected for preventing pacing-induced cardiomyopathy. LBBAP involves aiming for a R' in lead V1 QRS complex at the time of implantation and usually results in a narrow QRS pattern. V-pace stimulation artifact to QRS delay may be seen. This in turn, demonstrates an identifiable iso-electric ST segment permits identifying ST segment changes.

Case: A 73-year-old female with hypertension, type 2 diabetes, dyslipidemia, and bronchiectasis admitted on 03.09.2023 with the acute onset of pre-syncope and was found to have RBBB and left posterior fascicular block and later intermittent 2:1 AV block. CAG showed minor plaques in the LAD. PPI with LBBAP was performed. Baseline ECG after PPI showed a qR in V1 with QRS duration of 116ms (baseline 171ms). On 12.12.2023 an ECG showed narrow QRS of 122 ms however there was loss of R' in V1. Patient did not have any cardiac symptoms at this stage and subsequently lost to follow up. On 07.09.2024, the patient presented to ED with giddiness with sweating. Although she did not complain of any chest pain, her ECG showed ST segment elevation in Lead V3- V6 and QRS of 140ms. Her high-sensitive troponin was elevated and bedside echo showed new regional wall motion abnormalities. The patient was taken to the cath-lab. Her CAG showed diffuse proximal disease with probable ruptured plaque in proximal LAD which was confirmed by IVUS. A DES (3.5x26mm) was implanted in proximal

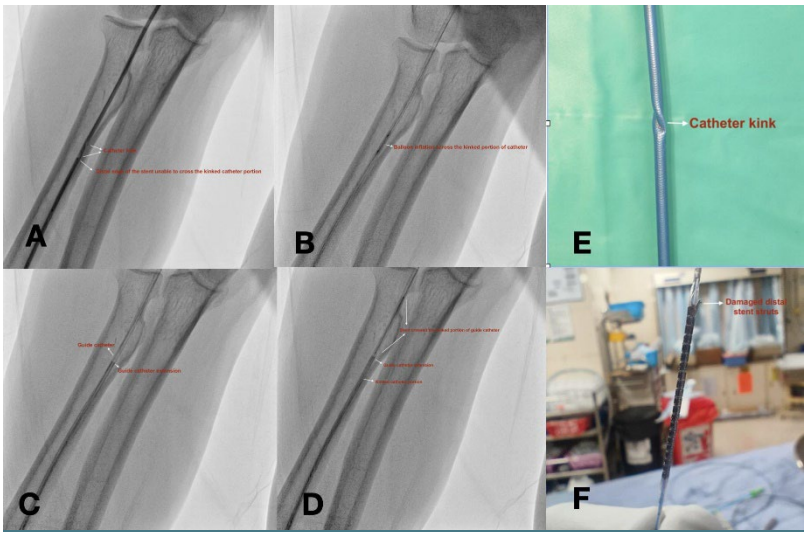
LAD with achievement of good TIMI 3 flow. 02 months post PCI shows QRS was 140ms with QS in leads V1-V3.

Decision-making: Finding new ST elevation in the paced QRS led to performing CAG.

Conclusion: LBB area pacing does not preclude identification of a STEMI and corroborative evidence based on other investigative modalities will be helpful in the management of the patient. In the acute setting of LBB area pacing the possibility of injury to the septal branch of the LAD would always be considered, if ST elevation occurs. CAG in our patient showed the septal branch was well away from the pacing lead-tip and the STEMI occurred one year after the PPM implantation.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	19
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	WHEN THE ROAD BENDS - A NOVEL USE OF GUIDE CATHETER EXTENSION IN OVERCOMING CATHETER KINK TO FACILITATE STENT DELIVERY
Author Block:	Ram Manohar Talupula, Ramesh Babu Pothineni, Aster Ramesh Hospitals, Vijayawada, India
Abstract Body:	**Background:** Percutaneous coronary intervention (PCI) can be complicated by catheter kinking due to anatomical variations such as radial and subclavian tortuosity. This report highlights using a guide catheter extension to overcome catheter kinking during PCI. **Case:** A 65-year-old male with exertional angina was planned PCI for a lesion in the right coronary artery (RCA). A 6F Judkins Right (JR) catheter was used for engagement via the radial approach. The catheter kinked due to manipulation manoeuvring the subclavian artery tortuosity, impeding subsequent stent delivery. Balloon dilatation of the kinked segment was tried but wasn't helpful. A guide catheter extension was deployed to bypass the kink and successfully deploy the coronary stent. **Decision-making:** The guide catheter extension successfully navigated the kinked segment, facilitating smooth stent delivery without further complications. **Conclusion:** This case demonstrates the utility of guide catheter extensions in managing catheter kinking during PCI, providing an innovative solution for

complex anatomical challenges.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	20
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EFFECT OF LATE GADOLINIUM ENHANCEMENT ON LEFT ATRIAL FUNCTION IN PATIENTS WITH DILATED CARDIOMYOPATHY: A MULTI-CENTER CARDIAC MAGNETIC RESONANCE STUDY
Author Block:	Yiyuan Gao, Chengbin He, Shuang Leng, XIAODAN ZHAO, Ru San Tan, Angela Koh, Jingjing Shi, Xiaojie Wang, Wanzhen Li, Wenqi Liu, Risheng Yu, Liang Zhong, Hongjie Hu, Maosheng Xu, The First Affiliated Hospital of Zhejiang Chinese Medical University, Hangzhou, China, National Heart Centre Singapore, Singapore, Singapore
Abstract Body:	**Background:** This study aimed to investigate the effect of the presence, extent, and location of late gadolinium enhancement (LGE) on the left atrium (LA) function in patients with dilated cardiomyopathy (DCM) using cardiovascular magnetic resonance (CMR). **Methods:** In this multi-center retrospective study, consecutive patients with DCM who underwent CMR examination between June 2010 and March 2023 were included. LA strain parameters, including reservoir, conduit, and booster strain, were obtained using CMR feature tracking. Left ventricular scar presence, extent, and location were evaluated by LGE imaging. **Results:** A total of 616 patients with DCM (median age, 54 years, age range 18-83 years, 73% men) were studied. Of these patients, 345 (56%) patients exhibited a non-ischemic pattern of LGE. DCM patients with LGE presence showed significantly lower LA reservoir (17.7% ± 11.9% vs 13.5% ± 9.1%), conduit (8.7% ± 7.6% vs 6.3% ± 4.7%), and booster strain (9.0% ± 6.2% vs. 7.2% ± 5.8%) than those without LGE presence (all $P < 0.05$). In univariate linear regression, LA reservoir and conduit strain were decreased with the increase of LGE percentage ($r = 0.122$ and $r = 0.206$, both $P < 0.05$). Multivariable analysis showed LA conduit strain was independently

associated with LGE percentage after adjustment of other risk factors ($r = 0.144$, $P < 0.05$).
Conclusion: LA function impairment is associated with the presence and extent of left ventricular LGE in patients with DCM.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	21
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	REAL-WORLD EFFECTIVENESS AND SAFETY OF TORSEMIDE AND SPIRONOLACTONE FIXED-DOSE COMBINATION IN INDIAN HEART FAILURE PATIENTS: RESTORE-HF STUDY
Author Block:	Chandrashekhar Kashinath Ponde, Devanu Gosh Roy, Arun Mohanty, Uday Jadhav, Karan Dang, Febin Francis, Drnitin Zalte, Amarnath Sugumaran, Sandesh Sawant, Senthilnathan Mohanasundaram, Jaideep Gogtay, Cipla Ltd, Mumbai, India
Abstract Body:	**Background:** Heart Failure (HF) is a significant global health concern. Torsemide (T) and spironolactone (S) are widely administered individually for HF management, but evidence of their use as a fixed-dose combination (FDC) is limited in India. This study evaluated the effectiveness and safety of T/S FDC in Indian HF patients. **Methods:** This was a real-world prospective, multicentre, observational study of patients with HF in India from October 2023 to June 2024. Adults ≥ 18 to ≤ 75 years, de-novo HF (EF <40% and raised NT pro-BNP), or Patients with NYHA class 2 or 3 and who were eligible for initiating T/A FDC were included. The primary endpoint was to assess the change in body weight from baseline to 3 weeks. Ethics Committee approval and Informed consent were obtained. **Results:** A total of 1520 evaluable patients were included for analysis with a mean (SD) age of 58.61 (9.45) years, of whom 61.05% were male. At baseline, the mean (SD) of body weight in kg was 75.54 (9.47), which showed a statistically significant reduction to 73.13 (9.37) by the end of the study. The mean change in Body Weight from baseline to end of the study was 2.41 kg. At baseline, 70.33% of patients were classified as NYHA Class 2, and 29.67% as NYHA Class 3. By the end of the study, 77.16% of patients in NYHA Class 3 improved to Class 2, while 85.41% of those in NYHA Class 2 improved to

Class 1. Among patients with Grade 4 edema, 65.20% improved to Grade 3, while 82.02% of those with Grade 3 edema improved to Grade 2. Additionally, 91.34% of patients with Grade 2 edema progressed to Grade 1. Overall, 22.11% of patients achieved a no-edema stage. T2DM (18.27%) was a common co-morbidity followed by CAD (12.73%). Metformin was the most prescribed concomitant medication, followed by aspirin and telmisartan. There were three reported adverse events (all mild in severity).
Conclusion: Results demonstrated that T/S FDC was effective in achieving body weight reduction and was well tolerated in Indian Heart Failure patients.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	22
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	APICAL MYECTOMY IN PATIENTS WITH APICAL HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Valentina Kirilova, National Medical Research Center named after Academician E. N. Meshalkin of the Ministry of Health o, Novosibirsk, Russian Federation
Abstract Body:	**Background:** Apical myectomy is a safe and effective technique for the treatment of apical hypertrophic cardiomyopathy (ApHCM). It seems extremely relevant to perform apical myectomy as an alternative to heart transplant in patients with advanced heart failure. **Methods:** Between January 2023 and January 2024, 7 patients underwent apical myectomy for ApHCM in our hospital. All of them were in New York Heart Association (NYHA) class III-IV despite medical treatment; 3 of them were observed as a heart transplant recipient. **Results:** The functional class significantly improved in all patients (NYHA I - 5 patients, NYHA II - 2 patients) after 12 months of follow-up. According to the echocardiography data in dynamics after 1 year, the left ventricular end-diastolic volume was 107±28.2, the left ventricular ejection fraction was 64.9±9.5. According to cardiac MRI, a significant increase in ventricular volume. In 1 case, successful excision of the apical aneurysm was noted, the presence of which in patients with HCM is associated with a high risk of sudden cardiac death (Fig.1). Hospital mortality was not registered. The corresponding survival rates for 1 year were 100%. Heart transplantation was not required during the follow-up. **Conclusion:** Severely symptomatic patients with ApHCM, despite optimal medical therapy, may be considered as candidates for transapical myectomy,

including as an alternative to heart transplantation.

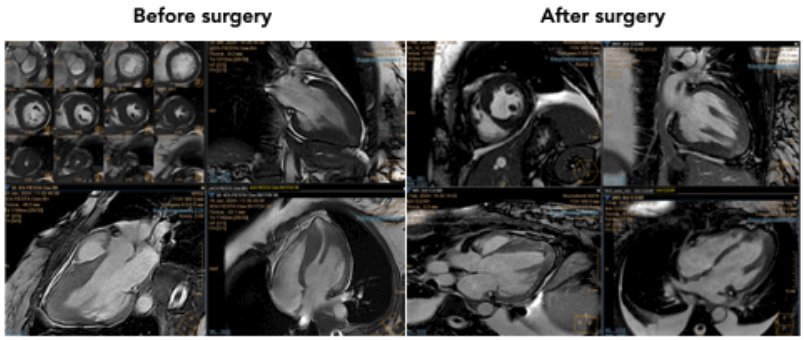


Figure 1. Cardiac MRI before and 12 months after apical myectomy

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	23
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	YOUNG PATIENTS WITH HEART FAILURE: INCIDENCE, CLINICAL CHARACTERISTICS AND OUTCOMES: A TERRITORY-WIDE STUDY FROM 2014-2023 ON 19,537 PATIENTS
Author Block:	Wenli Gu, Tiew-Hwa Katherine Teng, Carolyn S.P. Lam, Kai-Hang Yiu, The University of Hong Kong Shen Zhen Hospital, Shenzhen, China, The University of Hong Kong, Hong Kong, China
Abstract Body:	**Background:** Heart failure (HF), commonly considered a disease of the elderly, has been increasingly observed in younger individuals over recent decades. Comprehensive data on clinical attributes, outcomes, and corresponding variations over time remain scarce. **Methods:** Using Hong Kong territory-wide health registries, we identified 19,537 patients aged 18-65 years with newly diagnosed HF between 2014-2023. All subjects were tracked for the occurrence of primary and secondary endpoints, including mortality, HF hospitalization, major adverse cardiovascular events (MACE), and sudden death within one year. We calculated the standardized incidence rates (IRs) of young HF. Patterns of risk factors were determined by multivariable logistic regression. Outcomes were assessed by Kaplan-Meier curves and Cox regression. **Results:** The IRs of young HF progressively increased over time, with a predominance of men aged 45-65 years, by 20% (IRR 1.20, 95% CI 1.13-1.27). Concurrent with fewer comorbidities, young HF in 2019-2023 were more likely to be diagnosed at 45-65 years, associated with higher prevalence of obesity, cardiomyopathy and lower socioeconomic status, contrasting with conventional risk factors frequently observed among young HF in 2014-2018 (all $P<0.001$). Moreover, young HF in 2019-2023 demonstrated heighted rates

of guideline-directed medical therapy (GDMT) use compared to young HF in 2014-2018. There was no change in one-year mortality from 2014-2018 to 2019-2023 (HR 1.01, 95%CI 0.94-1.10), regardless of the CV (HR 0.97, 95%CI 0.87-1.08) or non-CV mortality (HR 1.10, 95%CI 0.97-1.26). In contrast, the risks of HF hospitalization (HR 0.79, 95%CI 0.75-0.83), CV mortality or HF hospitalization (HR 0.81, 95%CI 0.77-0.85), MACE (HR 0.84, 95%CI 0.78-0.91) and sudden death (HR 0.75, 95%CI 0.63-0.89) significantly decreased.
Conclusion: Although young HF incidence during 2014-2023 increased substantially, we observed that there was no increase in one-year mortality, with a decreased risk of adverse cardiovascular events. These findings can be attributed to the observed decrease in comorbidities, evolving risk factor patterns, and improved GDMT use over the study period.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	24
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	HIGH PREVALENCE OF MASLD IN HFPEF: COMPOUNDING THE WEB OF INTERLINKED DISEASES
Author Block:	Madel HIDALGO, Raul Lapitan, Makati Medical Center, MAKATI CITY, Philippines

Abstract Body:

Background: Metabolic Dysfunction Associated Steatotic Liver Disease (MASLD) is one of the most common causes of liver disease in western countries. Several reports have correlated MASLD as a risk factor for coronary artery disease. Its relationship with the development of heart failure is less clear.

Methods: A single center, retrospective chart review of 3164 charts from the medical records of a tertiary center for 2011 to 2021 with the diagnosis of HFpEF included adults 18 to 95 years old. Abdominal imaging and cardiometabolic criteria were used to identify the presence of MASLD. Descriptive statistics were used to summarize the general and clinical characteristics of the participants.

Results: Patients were grouped according to diagnosis of HFpEF (1576; 56.17%), HFrEF(638; 22.74%), and HFmrEF(592; 21.10%). A sample size of 217 patients diagnosed with heart failure with preserved ejection fraction was included. Out of these, 85 patients were identified with MASLD, resulting in a prevalence rate of 39.17% within the studied population. BMI did not show a significant association with MASLD when adjusted to age and sex though there is a trend toward increased odds in heavier categories indicating that BMI might not be a strong independent predictor in this context. Smoking status is significantly associated with MASLD, with smokers having higher odds of MASLD in adjusted analyses (OR=2.53, 95% CI: 1.08-6.07, p=.034),

suggesting smoking as a potential risk factor. There was a significant increase in the odds of MASLD with higher triglyceride levels (adjusted OR=1.01, 95% CI: 1.01-1.02, p=.037). This suggests that elevated triglyceride levels may be associated with a higher likelihood of MASLD among HFpEF patients.
Conclusion: HFpEF is a curious amalgam of comorbidities. Hypertension, atrial fibrillation, diabetes mellitus, and cardiovascular diseases were present in both groups of patients with or without MASLD. In the background of the high prevalence detected in this study, MASLD may not be a benign entity in the setting of cardiovascular diseases as previously thought and can be an early indicator of a metabolic-inflammatory syndrome that the clinician must judiciously explore.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	25
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	COMPARING DIAGNOSTIC ACCURACY OF HFA-PEFF AND H2FPEF FOR DIAGNOSING HEART FAILURE WITH PRESERVED EJECTION FRACTION: A BAYESIAN DIAGNOSTIC META-ANALYSIS
Author Block:	Derren Rampengan, Christo Timothy, Dwinanda Prabawa, Imke Puling, Jesphine Arbi Wijaya, Hilmi Amirul Haq, Febryano Adi Prawira, Faculty of Medicine, Universitas Sam Ratulangi, Manado, Indonesia, Faculty of Medicine, Universitas Udayana, Bali, Indonesia
Abstract Body:	**Background:** HFpEF, defined as LVEF ≥50% with increased left ventricular filling pressures, affects over 64 million people worldwide, comprising nearly half of heart failure cases. Diagnosis is challenging due to inconsistent presentation. This meta-analysis aims to compare the H2FPEF and HFA-PEFF scoring tools, utilizing Bayesian methods to address the limited number of studies available. **Methods:** The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) 2020 protocol was used for the literature search and systematic review. Studies reporting on the diagnostic performance of either H2FPEF or HFA-PEFF were included, primary outcomes include sensitivity, specificity, and AUC. Penalized complexity and normal priors were chosen for the hyperparameter distribution. Risk of bias was assessed using the QUADAS 2 tool. All statistical analyses were performed, and plots were generated using the R Statistical Software v.4.3.0 **Results:** This study included 8 cohort studies and analyzed 3,037 patients. Diagnostic performance of HFA-PEFF had an AUC of 0.8915 [CrI 0.83-0.943] with a specificity of 0.88 [0.74-0.96] and a specificity of 0.72 [0.51-0.87], the “Rule in” and the “Rule out” approach yielded a sensitivity and specificity of 0.63 [0.47-0.77], 0.91 [0.82-0.95] and 0.99 [0.97-1.00], 0.24 [0.11-0.45]

respectively. On the other hand, H2FPEF had an AUC of 0.8561 [CrI 0.72-0.941] with a sensitivity of 0.80 [0.48-0.95] and a specificity of 0.77 [0.48-0.93], the “Rule in” and the “Rule out” approach yielded a sensitivity and specificity of 0.47 [0.30-0.65], 0.93 [0.82-0.97] and 0.99 [0.96-1.00], 0.20 [0.06-0.50] respectively.

Conclusion: This Meta-analysis revealed that HFA-PEFF and H2FPEF had marginal differences, showing a trade off for sensitivity and specificity, with HFA-PEFF having more sensitivity than H2FPEFF. Rule in approach was better suited for HFA-PEFF rather than H2FPEF, and Rule out approach had an overall poor performance in both scoring algorithms. Although our priors were based on previous studies, our data still showed outliers. Hence furthermore robust studies are warranted.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	26
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EFFECTS OF GLUCAGON-LIKE PEPTIDE-1 AGONISTS IN HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Min Xuan Tan, Aravinthan Vignarajah, Min Choon Tan, Monash Univeristy Malaysia, Selangor, Malaysia, Mayo Clinic Arizona, Phoenix, AZ, USA

Abstract Body:

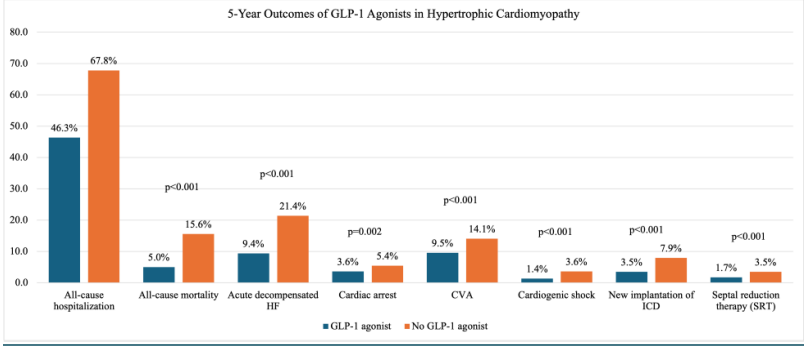
Background: Glucagon-like peptide-1 (GLP-1) agonists have shown improved outcomes across various cardiovascular disease. However, data regarding its effects in hypertrophic cardiomyopathy (HCM) is limited.

Methods: Using TriNetX Analytics Network, we identified patients aged ≥18 years with HCM between 1/1/2014 and 1/1/2019. Patients were divided into 2 groups: those treated with GLP-1 agonists for ≥ 1 year and those who were not. Propensity score matching (PSM) was performed using demographics, cardiac medications, and comorbidities. The study outcomes were 5-year all-cause mortality and cardiac adverse events.

Results: A total of 52,987 patients with HCM were identified, including 2,654 (5%) patients treated with GLP-1 agonist. After PSM, 2,588 patients in each group were analyzed. Patients on GLP-1 agonist were associated with lower risks of all-cause mortality (OR: 0.287, 95% CI: 0.233-0.352), hospitalization (OR: 0.410, 95% CI: 0.366-0.459), acute decompensated HF (OR: 0.381, 95% CI: 0.324-0.448), cardiac arrest (OR: 0.654, 95% CI: 0.501-0.854), CVA (OR: 0.645, 95% CI: 0.543-0.765), and cardiogenic shock (OR: 0.364, 95% CI: 0.246-0.538). Additionally, reduced rates of new ICD implantation (OR: 0.419, 95% CI: 0.325-0.540) and septal reduction therapy (OR: 0.491, 95% CI: 0.342-0.705) were observed in GLP-1 group.

Conclusion: The use of GLP-1 agonists in HCM was associated with improved cardiovascular outcomes. Future clinical trials are needed to validate these

potential benefits.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	27
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	THE PIVOTAL ROLE OF CASCADE GENETIC SCREENING IN PATIENTS WITH TROPONIN I TYPE 3 MUTATION RELATED HYPERTROPHIC CARDIOMYOPATHY
Author Block:	Desak Gede Widyawati, Sia Ching Hui, Choo Yun Song, Marie Houdmont, Yoke-Ching Lim, Weiqin Lin, Chai Ping, Lynette Teo, National University Heart Centre Singapore, National University Hospital, Singapore, Singapore
Abstract Body:	**Background:** Hypertrophic cardiomyopathy (HCM) is the most common inherited cardiomyopathy and its course varies extensively. We will report two sisters who were found to carry the same gene mutation after family genetic screening but with different penetrance. **Case:** Patient A diagnosed with HCM and underwent gene testing which was positive for TNNI3 c.370G>C (p.Glu124Gln). An evaluation of her sisters was performed and all of them had the same mutation. Patient B had significant symptoms of chest pain and her cardiac magnetic resonance (CMR) revealed classical HCM with hyperdynamic ventricles and faint mid-wall myocardial enhancement (9% of the LV mass). On the other hand, patient C, despite being asymptomatic, presented with more advanced CMR findings of HCM: mildly reduced biventricular systolic function, and an extensive intense mid-wall myocardial enhancement (34% of the LV mass). **Decision-making:** Expression of HCM shows age-dependent penetrance, meaning its features may emerge with time in someone previously without signs or symptoms; thus cardiac evaluation should be repeated at regular intervals. In this report, two patients have been diagnosed with HCM in their 50s, while 1 patient was diagnosed in her 40s. This may relate to age-dependent expression of HCM. Although patient B had significant symptoms, her CMR demonstrated less fibrosis and better biventricular function. On the

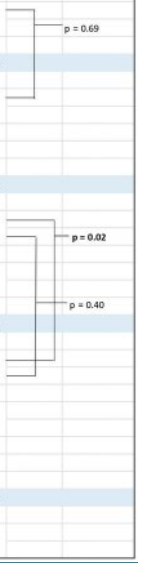
contrary, patient C was asymptomatic but her CMR revealed more extensive fibrosis, reduced biventricular function, and a higher risk for sudden cardiac death. This could be because her HCM was diagnosed later in life and detected at a more advanced stage. Hence, family screening should be performed in all first-degree relatives of proband regardless of their symptoms.

Conclusion: As we have reported, the two patients presented herein had different phenotypic expressions of the same TNNI3 gene mutation. Even among members of the same family, the clinical presentation of HCM can vary widely. This underscores the importance of regular clinical screening for all family members carrying gene mutations, regardless of their current clinical status.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	28
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	ROLE OF MID- REGIONAL PRO- ADRENOMEDULLIN (MR- PRO ADM) AND BIOLOGICALLY ACTIVE ADRENOMEDULLIN (BIO- ADM) AS A PROGNOSTIC BIOMARKER IN ACUTE HEART FAILURE PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Wilbert Huang, Apridya Nurhafizah, Alvin Frederich, Capella Kezia, Lisa Milena Anabela, Muhammad Irfan Fathoni, Alya Roosrahima Khairunnisa, Antania Devita Salma, Rivera Adenia Firza Zahrani, Intan Aulia Retnoningrum, Bambang Budi Siswanto, Rony M. Santoso, Faculty of Medicine, University of Padjadjaran, Bandung, Indonesia
Abstract Body:	**Background:** Residual congestion is associated with a high rehospitalization rate in acute heart failure (HF) patients. This study aims to evaluate the association of adrenomedullin (both MR-pro ADM and bio-ADM), a prognostic marker of tissue congestion, with clinical outcomes in acute HF patients. **Methods:** Three databases were systematically searched to include both observational and post hoc clinical trials. Outcomes assessed are clinical outcomes of in hospital mortality, composite outcome of all cause mortality and major adverse cardiovascular events (MACEs), and HF rehospitalization. Random effect model is used to conduct the meta-analysis. **Results:** Twenty-one studies of 18,110 patients with low to medium risk of bias are included. Both MR-pro ADM and bio-ADM measured at admission or discharge are associated with a statistically significant increasing risk of composite outcome, MACEs, and all cause mortality (HR 1.17 - 2.72,). MR- pro ADM is associated with a statistically significant increasing risk of in hospital mortality and HF rehospitalization (HR 1.72 & 2.20). Bio-ADM measured at discharge is found to have a better prognostic value for all cause mortality

outcome than bio-ADM measured at admission (HR 1.90 and 1.17, respectively, p 0.007). MR- pro ADM showed a strong and moderate linear correlation with bio- ADM and NT pro BNP (R 0.784, 0.461, respectively).
Conclusion: MR- pro ADM and bio- ADM are both reliable prognostic markers in acute heart failure patients.

In Hospital Mortality				
MR pro ADM	**No. of studies**	**OR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	2	2.20 (1.57 - 3.08)	0%	-
Discharge measurement	-	-	-	
Composite Outcome				
MR pro ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	5	2.49 (1.68 - 3.67)	74%	p = 0.84
Discharge measurement	3	2.35 (1.63 - 3.39)	36%	
Dichotomous variable				
Admission measurement	3	2.36 (1.56 - 3.58)	49%	p = 0.98
Discharge measurement	2	2.33 (0.86 - 6.33)	94%	
Bio ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	3	1.48 (1.02 - 2.15)	81%	p = 0.33
Discharge measurement	3	1.90 (1.37 - 2.63)	40%	
Dichotomous variable				
Admission measurement	-	-	-	-
Discharge measurement	-	-	-	
MACE Outcome				
MR pro ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	2	2.01 (1.64 - 2.46)	0%	
Discharge measurement	-	-	-	
Bio ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	2	1.69 (0.75 - 3.83)	90%	
Discharge measurement	-	-	-	
All cause Mortality Outcome				
MR pro ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	3	2.72 (1.38 - 5.39)	85%	p = 0.71
Discharge measurement	3	2.35 (1.63 - 3.39)	36%	
Dichotomous variable				
Admission measurement	3	2.36 (1.56 - 3.58)	49%	p = 0.98
Discharge measurement	2	2.33 (0.86 - 6.33)	94%	
Bio ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	2	1.17 (1.04 - 1.33)	12%	**p = 0.007**
Discharge measurement	3	1.90 (1.37 - 2.63)	40%	
Dichotomous variable				
Admission measurement	-	-	-	-
Discharge measurement	-	-	-	
HF rehospitalization				
MR pro ADM	**No. of studies**	**HR (Confidence Interval)**	**I2**	**Subgroup differences**
Continuous variable				
Admission measurement	-	-	-	-
Discharge measurement	3	1.72 (1.07 - 2.76)	64%	



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	29
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	RECURRENT CARDIAC MYXOMAS AS A MANIFESTATION OF CARNEY COMPLEX: A CASE REPORT
Author Block:	Van Hung Dung, Nguyen Van Phuoc, Heart Institute at Ho Chi Minh city, Ho Chi Minh city, Viet Nam

Abstract Body:

Background: Carney complex (CNC) is a rare autosomal dominant disorder characterized by recurrent cardiac myxomas, endocrine tumors, and spotty skin pigmentation. The diagnosis is challenging due to its variable presentation and overlapping features with other conditions.

Case: A 43 y.o female presented with progressive SOB. Laboratory evaluation revealed 24h urinary cortisol of 1049.3 nmol/L, LDDST cortisol level of 568 nmol/L, ACTH <1.5 pg/mL, and IGF-1 was 168 ng/mL, normal thyroid panel. Her medical history was significant for two prior cardiac surgeries: a left atrial myxoma resection in 2017 and a right atrial myxoma resection in 2021. Imaging, including echocardiography and CT scans, revealed two additional homogeneous masses in the right atrium consistent with myxomas. CT also showed bilateral adrenal nodules, thyroid cysts, and multiple nodules in both breasts. Family history was noted that her daughter exhibited spotty pigmentation on inner canthus, lips, conjunctiva, multiple fibrous breast nodules, ACTH-independent Cushing syndrome, and a history of thyroid carcinoma treated at age 12.

Decision-making: The recurrence of cardiac myxomas and endocrine findings prompted a clinical suspicion of CNC. Genetic testing for the PRKAR1A mutation was considered but not performed. Surgical resection of the right atrial masses was performed, revealing two stalked myxomas, attached near the interatrial septum. Histopathology confirmed the diagnosis

of cardiac myxomas. The patient's presentation and family history supported a diagnosis of familial CNC, although definitive genetic confirmation was not available. This case underscores the importance of recognizing CNC in patients with recurrent cardiac myxomas and endocrine manifestations. Annual monitoring with echocardiography, endocrine hormone panels, and imaging is recommended to detect recurrences

Conclusion: This case highlights recurrent cardiac myxomas as a hallmark feature of CNC and emphasizes the importance of thorough evaluation. Early recognition, particularly in familial settings, is critical for preventing complications and ensuring timely treatment

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	30
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	CORRELATION OF MEAN PULMONARY ARTERIAL PRESSURE AND SIX MINUTE WALK DISTANCE FOLLOWING SHORT TERM EXERCISE TRAINING IN PULMONARY HYPERTENSION
Author Block:	Muhammad Zakiy Azzuhdi, Citra Kiki Krevani, Kino Kino, Mutia Lailani, Universitas Andalas, Padang, Indonesia, Dr. M. Djamil Central General Hospital, Padang, Indonesia
Abstract Body:	**Background:** This study aimed to explore the relationship between mean pulmonary arterial pressure (mPAP) and the 6-minute walk distance (6MWD) improvement in patients with pulmonary hypertension (PH) who have participated in a short-term exercise training program. Gaining insights into this correlation could enhance management and rehabilitation strategies for individuals affected by this condition. **Methods:** This prospective study involved adult patients with pulmonary hypertension (PH) receiving care at the cardiology outpatient unit of a tertiary referral hospital. Participants engaged in a four-week exercise rehabilitation training program. The mPAP was measured before the intervention, and 6MWD was assessed before and after the training. The Shapiro-Wilk normality test was performed to evaluate the data distribution, followed by correlation tests to examine the relationship between mPAP and 6MWD. **Results:** A total of 14 patients with PH were included in the study. Following the four-week exercise rehabilitation training, the mPAP (mmHg) was 50.07 ± 23.27, while the 6MWD (%) improvement was 37.35 ± 19.67. The Shapiro-Wilk normality test confirmed that both variables were normally distributed. Correlation analysis revealed a negative correlation between mPAP and 6MWD ($r = -0.53$, $p = 0.050$). **Conclusion:** Our study demonstrated that pulmonary hypertension patients

with lower mean pulmonary arterial pressure experienced more significant improvements in their 6-minute walk distance following a four-week exercise training program. These results emphasized the potential advantages of short-term exercise rehabilitation for enhancing exercise capacity and effectively managing pulmonary hypertension.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	31
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	LONG-TERM OUTCOMES IN PATIENTS WITH NON-ISCHEMIC DILATED CARDIOMYOPATHY AND IMPROVED EJECTION FRACTION
Author Block:	ARGHADIP BOSE, Ajay Bahl, Saurabh Mehrotra, Ankur Gupta, Dinkar Bhasin, Postgraduate Institute of Medical Education and Research, Chandigarh, India
Abstract Body:	**Background:** Heart failure with improved ejection fraction (HFimpEF) is a distinct heart failure phenotype with favorable long-term outcomes. With the optimal use of guideline-directed medical (GDMT) and device therapy, most patients have a sustained improvement in left ventricular ejection fraction (LVEF). However, a significant proportion of these patients also have an eventual relapse in the LVEF that predicts future cardiac events. Reliable predictors of relapse of LVEF would enable targeted optimization of therapy and improve their long-term outcomes. **Methods:** It is a single-center retrospective study wherein the long-term follow-up data of patients in the non-ischemic dilated cardiomyopathy (DCM) cohort (LVEF <40% at baseline) who showed improvement in LVEF (>40% with an absolute increase in LVEF of ≥10%) was analyzed. Subgroup analyses were done based on - sex, age group, and outcome. **Results:** Out of the 548 patients in the non-ischemic DCM cohort, 131 (23.9%) had improvement in LVEF after a mean duration of 23.16 ± 26.06 months on GDMT. In the improved LVEF group, 72 (55%) patients had a sustained recovery of LVEF, while 59 (45%) patients had a relapse of LVEF after a mean duration of 69.05 ± 56.04 months. The mean follow-up duration of the study was 117.75 ± 61.62 months. On univariate analysis, diabetes mellitus (p-0.04), new-onset renal dysfunction (p-0.04), wider QRS width at diagnosis (p-0.001) and recovery (p-0.013), and a higher left ventricular

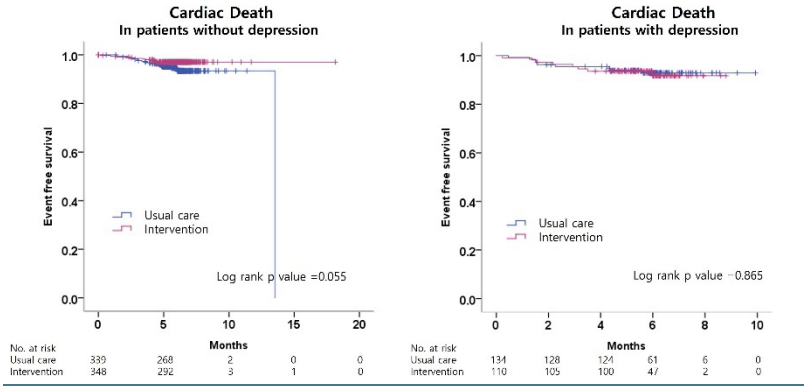
internal diameter at end-diastole (LVIDd) at recovery ($p<0.001$) were predictors of relapse. On multivariable analysis, only diabetes mellitus (p-0.044) and a higher LVIDd at recovery (p-0.004) were independent predictors of relapse. There was a total of 20 deaths with a higher proportion in the relapsed LVEF group (23.7%) compared to the sustained recovery group (8.3%).

Conclusion: Improvement in LVEF in non-ischemic DCM merely denotes a transient remission in the disease process as the cardiac functions are predisposed to re-worsening. Predictors of relapse in LVEF, like diabetes mellitus and a higher LVIDd at recovery, may be targeted from a therapeutic standpoint to improve the long-term outcomes of this heart failure phenotype.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	32
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	THE IMPACT OF DEPRESSION ON CLINICAL OUTCOMES IN ACUTE HEART FAILURE WITH REDUCED EJECTION FRACTION: A SUBSTUDY OF THE TRANS-HF TRIAL
Author Block:	MINSUN KIM, jung hyun choi, ByungSu Yoo, Dong-Hyuk Cho, Dong-Ju Choi, Hyun-Jai Cho, Chan Joo Lee, Jin-Oh Choi, Sang-Eun Lee, Jong-Chan Youn, Dae Hwan Bae, Jae-Hyeong Park, Kye Hun Kim, In-Cheol Kim, Eung Joo Kim, Wook-Jin Chung, Sunki Lee, Se Yong Jang, Pusan National University Hospital, Busan, South Korea
Abstract Body:	**Background:** Depression is common among heart failure (HF) patients, but its impact on long-term outcomes is unclear. This study investigates the relationship between depression and clinical outcomes in patients with HF and reduced ejection fraction (HFrEF) treated with guideline-directed medical therapy (GDMT). **Methods:** The TRANS-HF registry is a multicenter, prospective study in Kore aiming to evaluate whether a transitional care intervention (TCI) increases GDMT prescriptions. Of 982 enrolled patients, 928 completed a depression questionnaire. Depressed patients (n=244) were randomized to usual care (n=134) or intervention (n=110). Non-depressed patients (n=687) were randomized to usual care (n=339) or intervention (n=348). The primary composite endpoint was cardiac death, and secondary outcomes included changes in the KCCQ-CSS and HF hospitalization. **Results:** There were no significant differences in GDMT prescription achievement at 6 months between the intervention and usual care groups. Cardiac death rates did not differ significantly between depressed and non-depressed patients (p=0.085). Depressed patients had higher HF

hospitalization rates (p=0.013). Intervention showed a trend toward improved outcomes in non-depressed patients (p=0.055), but no such effect was seen in depressed patients (p=0.865).

Conclusion: Depressed patients had worse HF hospitalization outcomes, highlighting the importance of psychological support in HFrEF management.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	33
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	CARDIAC TAMPONADE MANIFESTING AS ACUTE LIVER INJURY: NOT THAT RARE AFTER ALL
Author Block:	Eng Kian Ng, Arjunkumar Asokan, Stephanie Yen Li Chang, HOSPITAL QUEEN ELIZABETH, KOTA KINABALU, Malaysia

Abstract Body:

Background: Toxins, ischemia and viral hepatitis are frequently desrcibed as causes of acute liver injury (ALI) with the alanine transaminase (ALT) and aspartate transaminase (AST) are in the thousands. Cardiac tamponade is rarely cited as a cause in the literature, being limited to a few case reports.
Case: A 50 year old gentleman with underlying chronic kidney disease (CKD) stage 5D, recently initiated on Continuous Ambulatory Peritoneal Dialysis (CAPD) 2 weeks prior and heart failure with reduced ejection fraction (HFrEF) presented with epigastric pain for two days. On presentation, his vitals were stable and the physical examination revealed tenderness in the epigastric region. The electrocardiogram revealed low amplitude QRS complexes. Blood investigations revealed a raised ALT 4321 U/L, AST 3279 U/L, lactate dehydrogenase (LDH) 4321 U/L, International Normalised Ratio (INR) 3.21, and Lactate of 4.1 mmol/L. The patient's liver function test (LFT) was normal 2 weeks prior. Chest radiograph revealed cardiomegaly with congested lung fields. The echocardiogram showed a global pericardial effusion of 2.8cm x 2.5cm with septations and demonstrated right atrial systolic and right ventricular diastolic collapse. Inferior vena cava diameter is 2.1 cm with no respiratory variation. The hepatic vein Doppler waveform showed S wave reversal, and the portal vein Doppler waveform demonstrated more than 50% pulsatility.
Decision-making: Urgent pericardiocentesis was performed, and 800cc of hemoserous fluid was drained. Pericardial fluid adenosine deaminase was

raised (42.1 U/L). The diagnosis of tuberculous pericarditis was made, and antituberculosis medication with a tapering dose of prednisone was commenced. The patient's LFT normalised after 5 days and was discharged after 1 week. The pathophysiology of cardiac tamponade resulting in ALI is due to impaired cardiac output (ischemic hepatitis) and hepatic venous congestion.

Conclusion: ALI with significant elevations of ALT/AST in the thousands should trigger the clinician to explore other causes and consider cardiac tamponade as a differential.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	34
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CORRELATION BETWEEN FECAL SULFATIDE LEVELS AND CORONARY HEART DISEASE
Author Block:	Yihan Li, Gang Li, Hu Rui, Hebei General Hospital, Shijiazhuang, China

Abstract Body:

Background: The study aimed to examine the relationship between fecal sulfatide levels and coronary heart disease.

Methods: The study included 793 patients admitted to Hebei General Hospital from September 2023 to May 2024. Patients were categorized into four groups based on the examination results: stable angina pectoris (SAP), unstable angina pectoris(UAP), acute myocardial infarction (AMI), the control. General information was collected for analysis, and fecal sulfatide levels were compared among groups. Binary logistic regression analysis assessed the correlation between fecal sulfatide levels and coronary heart disease.

Results: Statistically significant differences were observed in the characteristics of age, complete blood cell count, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol between the group of patients with coronary artery disease and the control group ($P<0.05$). Noteworthy, fecal sulfatide levels were notably higher in coronary artery disease groups - significantly elevated in SAP group, UAP group, and AMI group compared to normal control group. Furthermore, fecal sulfatide levels in AMI group significantly exceeded those in SAP and UAP groups ($P< 0.05$). Multivariate logistic regression analysis identified fecal sulfatide as an independent risk factor for coronary heart disease, with an area under the ROC curve of 0.893, indicating strong predictive value.

Conclusion: Fecal sulfatide emerges as a potential risk factor for coronary heart disease, exhibiting promising predictive value in disease prognosis.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	35
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	INVESTIGATION OF THE MECHANISMS BY WHICH TANYU TONGZHI FORMULA MODULATES THE INTESTINAL MICROENVIRONMENT TO PREVENT LPS TRANSLOCATION INTO THE BLOODSTREAM AND COUNTERACT ATHEROSCLEROSIS
Author Block:	Chenxia Wu, Tiantian Zheng, Wei Mao, Department of Cardiology, Affiliated Zhejiang Hospital, Zhejiang University School of Medicine, Hangzhou, China
Abstract Body:	**Background:** In traditional Chinese medicine, the intestinal microbiota is recognized as a crucial factor in the prevention and treatment of atherosclerotic cardiovascular disease. The *Tanyu Tongzhi Formula* (TTF) has demonstrated significant clinical efficacy, with prior research indicating its ability to markedly slow the progression of atherosclerosis (AS) in murine models. This study seeks to elucidate the precise mechanisms through which TTF modulates gut microbiota to mitigate AS in mice, focusing on the gut-axis perspective. **Methods:** An AS mouse model was developed by administering the water extract of the Phlegm Stasis Treatment Formula to *Ldlr* $^{-/-}$ mice, which were subsequently fed a high-cholesterol diet for 12 weeks. The composition and alterations of gut microbiota were assessed using 16S rRNA sequencing, alongside pathological histological staining to evaluate gut barrier function and AS. Additionally, fecal microbiota transplantation, single colonization with *Akkermansia muciniphila* (*A. muciniphila*), and antibiotic-mediated depletion of the native gut microbiota were employed to establish a "pseudo-germ-free" AS mouse model. **Results:** Following the TTF intervention, the intestinal microenvironment of mice, characterized by a marked increase in the expression of *A. muciniphila*.

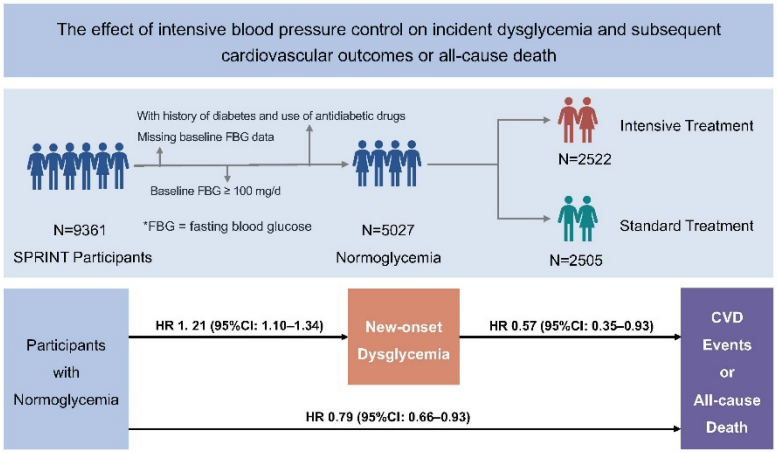
This was accompanied by an enhancement of intestinal barrier function, a reduction in intestinal permeability, and a decrease in the lipopolysaccharides (LPS) into serum. The anti-atherosclerotic effect was attributed to the inhibition of inflammation in plaques. In contrast, "pseudo sterile mice" did not exhibit significant improvement in AS following TTF intervention. Furthermore, transplantation of fecal microbiota from TTF-treated mice and monocultures of *A. muciniphila* into recipient mice led to improved AS outcomes, enhanced intestinal barrier function, and reduced serum LPS and local plaque inflammation levels.
Conclusion: TTF exerts anti-atherosclerotic effects by targeting the upregulation of *A. muciniphila*, enhancing intestinal barrier function, and inhibiting the translocation of LPS into the bloodstream.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	36
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE *TANYU TONGZHI FORMULA* ENHANCES IL-10 EXPRESSION AND MACROPHAGE EFFEROCYTOSIS TO ALLEVIATE ATHEROSCLEROSIS IN MICE
Author Block:	Chenxia Wu, Tiantian Zheng, Wei Mao, Department of Cardiology, Affiliated Zhejiang Hospital, Zhejiang University School of Medicine, Hangzhou, China
Abstract Body:	**Background:** Traditional Chinese Medicine (TCM), a significant subdiscipline within the realm of complementary medicine, has witnessed a surge in popularity across both Asian and Western nations over the past few decades. It holds potential as an adjunctive therapy for the management of atherosclerotic cardiovascular disease. As a TCM formula with decades of clinical application, *Tanyu Tongzhi Formula* (TTF) has been demonstrated through completed randomized controlled multicenter clinical studies that this treatment can extend the maximum exercise duration in patients with chronic coronary syndrome and ameliorate traditional Chinese medicine syndromes. TTF emerges as a promising therapeutic candidate for coronary artery disease characterized by phlegm stasis interaction. However, the precise mechanisms by which TTF modulates macrophage function in the context of atherosclerosis(AS) remain to be elucidated. **Methods:** *Ldlr* or *Apoe* null mice were subjected to a Western diet for 8 weeks to induce AS, after which they received TTF treatment for an additional 12 weeks. RNA seq was employed to identify interleukin-10 (IL-10) as a key downstream molecule. To verify the role of IL-10 in mediating the effects of TTF in reducing AS, macrophage-specific IL-10 knockout mice were utilized. **Results:** The administration of TTF significantly alleviates AS in mice, evidenced by a reduction in atherosclerotic lesions and plaque necrosis, alongside an augmentation in collagen content. RNA seq reveals a

substantial upregulation of IL-10 following TTF treatment, a finding corroborated in various macrophage populations and within mouse atherosclerotic plaques. IL-10 plays a crucial role in mediating the effects of TTF by enhancing macrophage efferocytosis. Notably, the targeted deletion of IL-10 in macrophages attenuates the therapeutic efficacy of TTF in mouse models of AS. Furthermore, TTF activates the NF-κB pathway, leading to increased IL-10 expression. And, Trichosanthes kirilowii and Acorus tatarinowii are identified as two functional components in TTF.
Conclusion: TTF enhances IL-10 expression and macrophage efferocytosis, thereby playing therapeutic roles in mouse AS.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	37
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EFFECTS OF INTENSIVE SYSTOLIC BLOOD PRESSURE CONTROL ON GLYCOMETABOLIC AND CARDIOVASCULAR OUTCOMES IN NORMOGLYCEMIC PATIENTS: A SECONDARY ANALYSIS OF A RANDOMIZED TRIAL
Author Block:	Cheng Yang, Fuwai Hospital, National Center for Cardiovascular Diseases, Chinese Academy of Medical Sciences and, Beijing, China
Abstract Body:	**Background:** Hypertension and dysglycemia frequently coexist, both associated with adverse cardiovascular outcomes. However, the effects of intense systolic blood pressure (SBP) control on dysglycemia incidence and subsequent outcomes remain unclear. **Methods:** In this secondary analysis of SPRINT, participants with baseline fasting blood glucose (FBG) concentrations <100 mg/dL, no history of diabetes, and no use of antidiabetic medications were included. The primary outcome was new-onset dysglycemia and subsequent composite outcomes of cardiovascular events or all-cause death. A competing risk proportional hazards regression model was used for analysis. **Results:** Among 5027 normoglycemic participants, 2522 were assigned to intensive treatment (target SBP <120 mmHg), and 2505 were assigned to standard treatment (target SBP <140 mmHg). Over a median follow-up of 3.76 years, incident dysglycemia occurred in 823 (37.7%) participants in the intensive group and 701 (32.3%) participants in the standard group, with a hazard ratio (HR) of 1.21 (95% CI, 1.10-1.34). Despite this harm, intensive SBP lowering significantly mitigated the subsequent composite of cardiovascular events or all-cause death, with an HR of 0.57 (95% CI, 0.35-0.93). **Conclusion:** Intensive SBP control increased the risk of incident dysglycemia,

nevertheless, this harm was offset by the benefits in cardiovascular and all-cause mortality.



Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	38
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	POSTMORTEM FINDINGS IN A CASE OF VENTRICULAR SEPTAL DEFECT
Author Block:	Sathya Veera Merla, Snikitha Tummala, Harshita Dubey, Amar Ranjan, All India Institute Of Medical Sciences Delhi, New Delhi, India

Abstract Body:

Background: Septal defects i.e. ventricular type, are the most common congenital defects of heart in child and the second most common in adults. Ventricular septal defect (VSD) can be of two types, membranous and muscular. The main mechanism is volume overload in left ventricle leading to hemodynamic compromise. VSD usually closes spontaneously in adults, but in 0.9% of cases it remains patent and grows into even larger defect.
Methods: A case which came for autopsy was reviewed.
Results: A 32-year-old male was found unconscious on his bed at his residence. He was suffering from ventricular septal defect since childhood and was undergoing medical treatment since then. He was brought dead to AIIMS Emergency and natural disease was mentioned in the medicolegal case (MLC). On postmortem examination, extensive congestion of internal organs was noted. We noted a large septal defect in inter ventricular septum which was of combination of both membranous and muscular type. The cause of death was given as shock due to complications of congenital congestive heart disease.
Conclusion: Opining the cause and manner of death required corroboration of detailed history-taking, previous health records, detailed police investigations, crime scene investigations and photographs along with meticulous postmortem examination. The adult with an unrepaired VSD with small defect can lead to left ventricular volume overload or alterations in the

adjacent structures. Such cases are prone to aortic valvular disease which cannot be managed medically and requires surgical closure. Endocarditis is a lifelong risk in medically managed cases (18.7 per 10 000 patient-years) and those with residual defects. So, this helped conclude the nature of the death and also opened area of awareness of the need for repeated follow ups and screening and proper prophylaxis for congenital heart disease.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	39
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	FROM PSORIASIS TO THE HEART: UNINTENDED CARDIAC CONSEQUENCES OF APREMILAST
Author Block:	VIPIN KUMAR VERMA, D S Arya, All India Institute of Medical Sciences, New Delhi, India

Abstract Body:

Background: Dysregulated β-receptor signaling is a key driver of cardiac dysfunction in heart diseases such as arrhythmias and heart failure, largely due to prolonged elevation of cAMP levels. Phosphodiesterases (PDEs) serve as critical regulators of cAMP, with PDE4 specifically implicated in β-receptor-mediated chronotropic signaling. Apremilast, a PDE4 inhibitor widely used in psoriasis, may theoretically heighten the risk of arrhythmias and cardiac stress by extending catecholamine effects, potentially worsening myocardial injury. This study aimed to investigate the impact of PDE4 inhibition on cardiomyocytes itself and in isoprenaline induced model of myocardial Infarction.

Methods: Male albino Wistar rats were randomly assigned to seven groups: Normal Control, ISO Control, ISO + 2.5 mg/kg AP, ISO + 5 mg/kg AP, ISO + 10 mg/kg AP, ISO + 20 mg/kg AP, and 20 mg/kg AP perse. Apremilast (AP) was administered for 21 days at respective doses, with isoproterenol (ISO) administered on days 20 and 21 (85 mg/kg) to induce myocardial necrosis. Hemodynamic parameters, histopathology, ultrastructural changes, oxidative stress markers, inflammatory cytokines, and apoptotic markers were analyzed in blood and myocardial tissue on day 22 post-surgery.

Results: Pretreatment with AP exacerbated myocardial damage following ISO-induced necrosis. Rats receiving AP showed pronounced hemodynamic instability, oxidative stress, and increased cardiac injury markers compared to

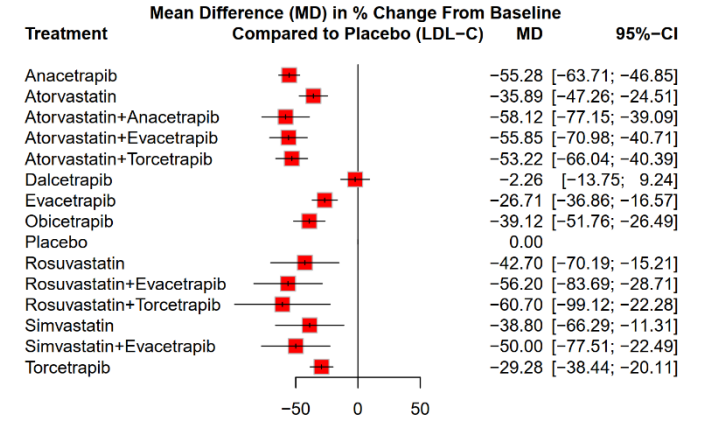
the ISO-Control group. Elevated inflammatory cytokines and apoptotic proteins highlighted a significant intensification of myocardial injury in AP-treated groups. A supplementary pilot study on the direct effects of AP revealed that 21-day administration led to similar patterns of cardiac dysfunction, including histopathological and ultrastructural damage, further confirming its deleterious effects.

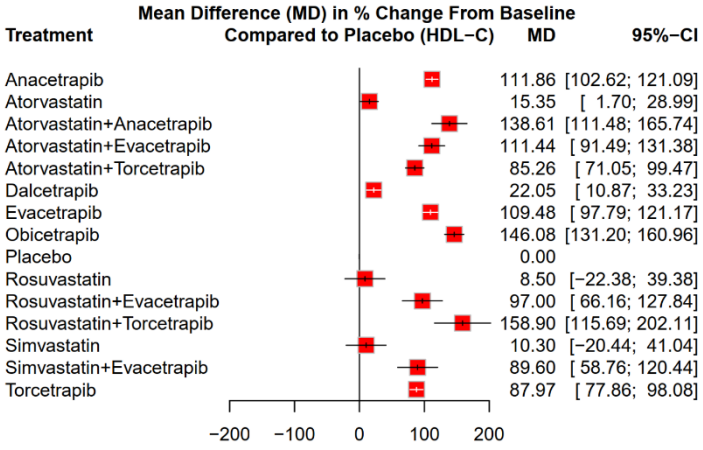
Conclusion: Our findings suggest that Apremilast significantly exacerbates myocardial injury and necrosis in rats, raising concerns about its safety in patients with ischemic heart disease. These results highlight the need for cautious use of PDE4 inhibitors in individuals with coexisting cardiac conditions.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	40
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	COMPARATIVE EFFECTIVENESS OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) INHIBITORS ON LIPID PROFILES IN ADULTS WITH HYPERLIPIDEMIA: A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS
Author Block:	Ibrahim Khalil, M Rafiqul Islam, Arindam Das Joy, Durjoy Acharjee, Sakib Abrar, Sunjida Amin Promi, Md Abu Sayed, Ali Saad Al-Shammari, Malaika Taseen, Suborna Biswas, Ta-Seen Bin Jamil, Sajjad Ghanim Al-Badri, Avijit Debnath, Sumaya Khan Mifty, Zahin Zeima, Umme Habiba, Md. Rezwanul Islam Raz, Raihan Kabir, Mahamudul Hasan Yusuf, Md. Imran Hossain, Dhaka Medical College and Hospital, Dhaka, Bangladesh, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh
Abstract Body:	**Background:** Hyperlipidemia, a major risk factor for cardiovascular diseases, necessitates innovative lipid-lowering therapies. This study evaluates the effectiveness of Cholesteryl Ester Transfer Protein (CETP) inhibitors as promising agents for improving lipid profiles in adults. **Methods:** We conducted a network meta-analysis of 38 RCTs involving 137,123 patients, comparing CETP inhibitors with standard therapies or placebo. Outcomes were expressed as mean differences (MD) in percentage changes from baseline using a random-effects model with 95% confidence intervals (CI). **Results:** Significant LDL-C reductions were observed with Anacetrapib (MD: -55.28%, 95% CI: [-63.71; -46.85], $p < 0.0001$), Atorvastatin + Anacetrapib (MD: -58.12%, 95% CI: [-77.15; -39.09], $p < 0.0001$), and Atorvastatin + Torcetrapib (MD: -53.22%, 95% CI: [-66.04; -40.39], $p < 0.0001$). Obicetrapib (MD: -39.12%, 95% CI: [-51.76; -26.49], $p < 0.0001$) and Evacetrapib (MD: -26.71%, 95% CI: [-36.86; -16.57], $p < 0.0001$) also showed notable efficacy. Significant HDL-C

increases were observed with Obicetrapib (MD: +146.08%, 95% CI: [131.20; 160.96], p < 0.0001), Rosuvastatin + Torcetrapib (MD: +158.90%, 95% CI: [115.69; 202.11], p < 0.0001), and Atorvastatin + Anacetrapib (MD: +138.61%, 95% CI: [111.48; 165.74], p < 0.0001).

Conclusion: CETP inhibitors, especially in combination therapies, significantly improve LDL-C and HDL-C levels, highlighting their potential as innovative therapies for managing hyperlipidemia.





Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	41
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	UNVEILING THE CROSSROADS OF CARDIAC CACHEXIA AND NEURODEGENERATIVE DISORDERS: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Faizan Ishtiyaque Khan, Amanpreet Singh Wasir, Aditi Agarwal, Ankur Singla, Ashvath Arumugam Pillai, Naveen Goyal, pradeep valluri, DY Patil University School of Medicine, Navi Mumbai, India, Bharati Vidyapeeth University Medical College, Pune, India
Abstract Body:	**Background:** Cardiac cachexia and neurodegenerative diseases are interconnected through shared inflammatory and neuroendocrine pathways. Inflammatory mediators along with disruptions in hormonal signalling, contribute to the exacerbation of both conditions. However, the precise pathophysiological mechanisms underlying this association remain poorly understood. We conducted a systematic review to investigate the association between cardiac cachexia and neurodegenerative diseases. **Methods:** A comprehensive search was conducted across PubMed, Embase, and Cochrane Library to identify studies evaluating the association between cardiac cachexia and neurodegenerative diseases. A total of 12 randomized controlled trials (RCTs) and propensity score-matched studies were included. Data from these studies were pooled, and mortality and morbidity outcomes were analyzed. Statistical significance was determined using the variance components model, with outcome measures expressed with 95% confidence intervals (CI). P-value ≤0.05 was significant. **Results:** The meta-analysis included 16 studies that demonstrated a significant coexistence of cardiac cachexia syndromes and neurodegenerative diseases. Pro-inflammatory cytokines, particularly tumor

necrosis factor (TNF)-alpha and interleukin (IL)-6, were notably upregulated (standardized mean difference (SMD)= 0.45, 95% CI: 0.30-0.60, p <0.001). Neuroendocrine activation, marked by elevated catecholamines and cortisol levels, was strongly associated with worsening clinical symptoms (SMD= 0.52, 95% CI: 0.35-0.69, p <0.001). Increased mortality and morbidity rates were observed, with odds ratios (OR) of 3.6 (95% CI: 2.8-4.5, p <0.001) and 4.2 (95% CI: 3.5-5.0, p <0.001), respectively.

Conclusion: Cardiac cachexia and neurodegenerative disorders are potentially interconnected through a shared inflammatory and neuroendocrine pathway. This pathway involves the simultaneous production of TNF and natriuretic peptides, which play critical roles in the pathophysiology of both conditions. However, large-scale longitudinal studies are necessary to validate these findings and establish the strength of this association.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	42
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE ROLE OF CARDIAC STEM CELL THERAPY IN ENHANCING NEUROGENESIS AND PROVIDING NEUROPROTECTION: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Aishwarya J, Amanpreet Singh Wasir, Devang Srivastava, Aditi Agarwal, Ashvath Arumugam Pillai, Archana Kaushik, Ankur Singla, Saveetha Medical College and Hospital, Chennai, India, Bharati Vidyapeeth University Medical College, Pune, India
Abstract Body:	**Background:** Cardiac stem cell therapy exhibits unique properties, including anti-apoptotic, anti-inflammatory, and angiogenic effects, promoting neurogenesis, neuroprotection, and blood-brain barrier integrity. While associated risks such as teratoma formation remain, this therapy offers substantial potential for addressing conditions like fetal growth restriction, which can result in cerebral palsy and behavioral disorders. We conducted a systematic review of existing studies investigating the impact of cardiac stem cell therapy on neurogenesis and neuroprotection. **Methods:** A comprehensive search was conducted across PubMed, Embase, and Cochrane Library using PRISMA guidelines to select studies based on predefined inclusion criteria, focusing on randomized controlled trials (RCTs), cohort studies, and case-control studies. The quality of included studies was assessed using the Newcastle-Ottawa Scale (NOS) for observational studies and the Cochrane Risk of Bias Tool for RCTs. Data on study characteristics, cardiac stem cell composition, and clinical outcomes were extracted and synthesized. Statistical significance was set at $p<0.05$. **Results:** We found that microglia activation is markedly reduced (standardized mean difference (SMD)=-0.55, $p<0.001$) supporting the

protective role of cardiac stem cell therapy in fetal growth restriction. Also, intra-arterial stem cell delivery of calcineurin in ischemic stroke models demonstrated a marked improvement in neuronal survival (Odds Ratio=1.85, p=0.002) and behavioral outcomes (SMD=0.48, p=0.01). A reduction in apoptotic markers (SMD=-0.63, p<0.001) and an enhancement in angiogenesis (SMD=0.52, p=0.002) was also found.

Conclusion: Cardiac stem cell therapy demonstrates significant potential in promoting neurogenesis and providing neuroprotection. These findings provide a strong basis for the therapeutic potential of cardiac stem cells in neurodegenerative disorders. However, large-scale randomized clinical trials are essential to fully understand the long-term neuroprotective benefits and safety profile of this therapy in neurological disorders.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	43
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	PROTEOMIC ATLAS OF DIFFERENT PATHOLOGICAL STAGES OF ATHEROSCLEROTIC LESIONS IN HUMAN CORONARY ARTERIES
Author Block:	Xinjie Xu, Fuwai Hospital, CAMS and PUMC, Beijing, China
Abstract Body:	**Background:** The key molecular mechanisms associated with human atherosclerotic plaque progression, atherosclerotic lesion initiation and plaque destabilization are not fully understood. **Methods:** We employed 50 coronary artery samples among 10 explanted hearts from coronary heart disease patients. Each heart contains stages of unaffected control (NC), pathological intimal thickening (PIT), fibroatheroma (FA), transition to thin-capfibroatheroma (TCFA) and ruptured plaque (RP), which were validated by hematoxylin and eosin (H&E) staining. We performed quantitative proteomics in each of the samples based on tandem-mass-tags and liquid chromatography-tandem mass spectrometry. Furthermore, we measured proteins inhuman coronary artery tissue via immunofluorescence. **Results:** Proteomics revealed that extracellular matrix (ECM) organization was the most significantly enriched pathway in PIT. FA exhibited an enrichment of immunologic processes, such as neutrophil degranulation, myeloid leukocyte activation and innate immune response. Molecular profiles of TCFA and RP are similar, with complement and coagulation cascades pathway as a hallmark of these stages. Clustering analysis of DEPs displayed 4 clusters, notably cluster 2 had a precipitous elevation from FA to TCFA. Within this cluster, we identified a high-rank molecule: macrophage-capping protein (CAPG). Immunohistochemistry and immunofluorescence revealed that CAPG is highly elevated in plaque compared to NC and is

specifically expressed in the plaque.
Conclusion: ECM organization was continuously dysregulated in AS progression. Immune response might initiate the atherosclerotic plaque. Complement and coagulation cascades pathway was a hallmark of TCFA and RP. CAPG might be a therapeutic target for AS progression.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	44
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	IMPACT OF BODY WEIGHT CHANGE ON METABOLIC SYNDROME: INSIGHTS FROM THE FRAMINGHAM OFFSPRING STUDY
Author Block:	Jian Liu, Brock University, St. Catharines, Canada

Abstract Body:

Background: Metabolic syndrome (MS) is a well-established risk factor for cardiovascular disease and is more prevalent among individuals who are overweight or obese. However, the long-term impact of weight change on the risk of MS remains unclear. This study utilizes data from the Framingham Offspring Study (FOS) to investigate this relationship.

Methods: A total of 1,505 individuals from the FOS were included in this analysis. Participants had complete body composition data at both baseline (1971-1975) and wave 9 (2011-2014). Weight change (WC) was calculated as the difference in weight between wave 9 and baseline and categorized into quartiles: **Q1 (<1 lb, reference group), Q2 (~16 lbs) ,Q3 (~32 lbs), Q4 (>32 lbs).** Metabolic syndrome (MS) was defined according to the American Heart Association (AHA) criteria, which include elevated blood glucose, low HDL cholesterol (HDL-c), high triglycerides (TG), increased waist circumference, and high blood pressure. Multiple regression models were used to examine the association between WC and MS at wave 9. Analyses were conducted using RStudio, with statistical significance set at **$P < 0.05$**.

Results: When WC was treated as a continuous variable, it was positively associated with most MS components at wave 9, except for HDL-c, which was negatively associated. Compared to the reference group (Q1), after adjusting for age, sex, smoking status, alcohol intake, and baseline MS components, the odds ratios (OR) and 95% confidence intervals (CIs) from

logistic regression were: **Q2:** OR = 3.34 (95% CI: 2.33, 4.82), **Q3:** OR = 7.34 (95% CI: 5.01, 10.89), **Q4:** OR = 18.57 (95% CI: 12.24, 28.63).
Conclusion: Lifetime weight gain is strongly associated with an increased likelihood of developing MS, which may significantly elevate the risk of cardiovascular disease. These findings underscore the importance of weight management across the lifespan to reduce the burden of metabolic and cardiovascular health risks.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	45
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	TUBERCULOUS PERICARDITIS PRESENTING AS TENDINITIS OF BOTH SHOULDERS, A CASE REPORT
Author Block:	Evan Selodio, Ray Albert Cabigan, Perpetual Help Medical Center Binan, Binan, Philippines

Abstract Body:

Background: We report a case of tuberculous pericarditis with an unusual presentation

Case: This is as case of a 63-year-old male who presented with pain on his both shoulders associated with limitation of movement which started two weeks prior to admission. He consulted an orthopedic surgeon and MRI of both shoulders was requested which showed calcific tendinitis and torn tendons. Patient was treated with steroids and NSAIDS. Despite treatment, the symptoms persisted and progressed over a course of 2 weeks. He was then brought to emergency room and noted to be hypotensive and mildly jaundiced. Patient had clear breath sounds and distinct heart sounds. There was tenderness on both shoulders and trapezius muscles. Patient had grade 3 bipedal edema. Diagnostics revealed an ECG in sinus rhythm. Chest X-ray showed cardiomegaly and no lung opacities while CBC showed leukocytosis. He was managed as septic shock. Whole abdominal CT scan was done to rule out cholangitis and incidentally revealed the presence of a massive pericardial effusion which was also seen in 2 d echocardiogram. Patient was referred to TCVS for urgent pericardial window and tube insertion. Perioperatively, pericardium was noted to be thickened and pus filled. Pericardial fluid analysis was done revealing exudative pericardial fluid and negative for fast bacilli. Pericardial fluid adenosine deaminase was elevated at 187 U/L suggestive of tuberculous pericarditis. The patient's condition

gradually improved however, the patient developed massive melena hence EGD was done which demonstrated Forrest II and III gastric ulcers. Patient was treated accordingly.

Decision-making: HRZE could not be started during the admission due to persistently markedly elevated liver enzymes. The patient was discharged with colchicine, analgesics and proton pump inhibitors. On follow up, liver enzymes improved and patient was then started on HRZE. There was progressive improvement on patient's symptoms.

Conclusion: Diagnosis of tuberculous pericarditis with atypical presentation can be challenging and may lead to misdiagnosis, missed diagnosis and delay of treatment. Prompt intervention should be done once diagnosis is made.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	46
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	OBESITY AND CENTRAL OBESITY AMONG SOUTH ASIANS
Author Block:	Rubina Rauf, Muhammad Nauman Khan, Jawaid A. Sial, Nadeem Qamar, Tahir Saghir, Khawar Abbas Kazmi, National Institute of Cardiovascular Diseases, Karachi, Pakistan

Abstract Body:

Background: Obesity and central obesity are significantly rising among South Asians and are strongly associated with cardiovascular diseases and other co-morbid like hypertension, diabetes mellitus, and dyslipidemia. These co-morbid and cardiovascular diseases appear with relatively lower BMI and waist circumference in South Asians than in Euripides. The study's main purpose is to re-assess the regional prevalence and trends of overweight and obesity.

Methods: By WHO criteria for Asians, obesity was categorized if the body mass index (BMI) exceeded 24.9 kg/m^2. Waist circumference (WC) was categorized as normal waist, borderline, and centrally obese based on WC< 31.5 ± 2 inches for females and WC < 35.5 ± 2 inches for males. A group of borderline WC in the range of ± 2 inches was created to compensate for the measurement error. The ± 2 inches was estimated based on the average difference between subsequent measurements by independent observers.

Results: We included a total of 2144 individuals; 71.2% (1527) were obese. Obesity was observed to be associated with female gender, middle age (40 to 60 yrs), hypertension, diabetes, deranged total cholesterol levels, and deranged LDL levels. The prevalence of obesity was 16% among individuals with normal WC, and it was observed to be 90.4% among centrally obese individuals. The WC was available for 1174 individuals, out of which only

8.5% (100) had normal waist size and 68.1% (800) were centrally obese. Central obesity was more common among females, middle-aged (40 to 60 yrs), hypertensive, diabetics, and individuals with deranged total cholesterol levels and deranged LDL levels. There was a strong association between the distribution of WC and BMI, with 83.4% central obesity among obese individuals.

Conclusion: Obesity and central obesity are among the preventable causes of cardiovascular deaths. Only BMI is not enough to assess health risk, but measurement of WC is also crucial in the CVD risk assessment. A significant number of individuals have central obesity but normal BMI and high CVD risk. Thus, actual health risk assessment is underestimated in these patients. Effective, sustainable, and culturally acceptable measurements are essential.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	47
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	INDIVIDUALIZED REPAIR OF SUPRAVALVULAR AORTIC STENOSIS IN CHILDREN WITH WILLIAMS SYNDROME: A 20-YEAR EXPERIENCE
Author Block:	Fengqun Mao, Pediatric Cardiac Surgery Center, Fuwai Hospital, Chinese Academy of Medical Sciences, Beijing, China
Abstract Body:	**Background:** Williams syndrome is a rare genetic disorder associated with supravalvular aortic stenosis (SVAS) in childhood. This study reviewed our institutional experience in the management of SVAS in children with Williams syndrome during a 20-year period. **Methods:** Seventy-one patients with Williams syndrome undergoing surgery for SVAS were identified between 2005 and 2024. Mean age at operation was 37.3 months (range, 2.3 months to 99.4 months), and mean weight at operation was 14.4 kg (range, 4.2 kg to 32 kg). Associated cardiac lesions in 36 patients (50.7%) were repaired at the time of the SVAS repair. The most common associated cardiac lesion was main pulmonary artery stenosis (24 of 36 [66.7%]). A Doty repair in 39 patients (54.9%), a McGoon repair in 31 (43.7%), and a 3-patch repair was performed in 1 (1.4%). **Results:** There was one in-hospital death. The median follow-up was 58.5 months (range, 4 months-17.5 years). There were 2 late deaths. Survival at 1, 5, and 15 years was 97.2%, 94.7%, and 94.7%, respectively. Residual aortic stenosis occurred in 13 (18.3%) patients. Multivariable analysis showed that preoperative gradient ≥ 90 mmHg (P = 0.002) was an independent risk factor for residual aortic stenosis, but surgical technique (P = 0.579) was not a risk factor for residual aortic stenosis. Residual stenosis-related reintervention occurred in 10 (14.1%) patients. On multivariate analysis, preoperative sinotubular junction (STJ) z-score < -3.5 (P = 0.051) and Doty repair (P = 0.033)

were found to be independent risk factors associated with residual stenosis-related reintervention. In the overall cohort, freedom from residual stenosis-related reintervention at 1, 5 and 15 years was 97.6%, 88.7% and 78.9%, respectively.

Conclusion: Surgical repair of SVAS can be safely achieved using different techniques, with similar long-term mortality. Patients with preoperative gradient ≥ 90 mmHg are more prone to residual aortic stenosis. Surgical technique was not associated with residual aortic stenosis rates. Preoperative STJ z-score < - 3.5, and Doty repair are associated with higher residual stenosis-related reintervention rates.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	48
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	NEURAL STEM CELL THERAPY FOR AUTONOMIC MODULATION IN POST-STROKE CARDIAC REHABILITATION: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Naveen Goyal, Amanpreet Singh Wasir, Ankur Singla, Ashvath Arumugam Pillai, Aditi Agarwal, Arya Kulkarni, Aditi Arvind Kumar, Government Medical College & Rajindra Hospital, Patiala, India, Bharati Vidyapeeth University Medical College, Pune, India
Abstract Body:	**Background:** Ischemic stroke is one of the greatest causes of disability, morbidity and mortality worldwide. Cardiovascular complications and physical disabilities of stroke are primarily attributed to the associated autonomic dysfunction. Recent studies suggest that neural stem cell (NSC) therapy has the capability of stimulating the autonomic nervous system, helping revitalize neuronal plasticity after the nightmare of stroke. We conducted a systematic review of existing studies to evaluate the efficacy of NSC therapy in improving autonomic function and cardiovascular health among stroke patients. **Methods:** A comprehensive literature search was conducted in PubMed, Embase, and Cochrane Library for studies published up to 2024, adhering to PRISMA guidelines. Eligible studies included randomized controlled trials (RCTs), cohort studies, and case-control studies focusing on NSC therapy in stroke patients, with an emphasis on autonomic function and cardiovascular outcomes. Study quality was assessed using the Newcastle-Ottawa Scale (NOS) for observational studies and the Cochrane Risk of Bias Tool for RCTs. Extracted data included study characteristics, NSC composition, and clinical outcomes. Statistical significance was set at $p < 0.05$.

Results: A total of fifteen studies met inclusion criteria, which showed that NSC therapy significantly improved heart rate variability (HRV) and functional recovery post-stroke (standardized mean difference [SMD]= 0.62, 95% confidence interval [CI]: 0.45-0.79, $p < 0.01$). Cardiovascular parameters, particularly parasympathetic activity, also showed notable enhancement (SMD = 0.55, 95% CI: 0.40-0.70, $p < 0.001$).

Conclusion: NSC therapy shows promising potential in improving autonomic function and cardiovascular health in stroke patients, with significant implications for cardiac rehabilitation. Large-scale randomized clinical trials incorporating advanced technologies such as cyber-physical systems (CPS) are required to better understand outcomes and optimize post-stroke quality of life.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	49
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	ASSESSMENT OF ATHEROSCLEROTIC CARDIOVASCULAR DISEASE (ASCVD) RISK USING ASCVD RISK ESTIMATOR PLUS IN INDIAN PATIENTS WITH DYSLIPIDEMIA - A SUBGROUP ANALYSIS FROM A REAL-WORLD, RETROSPECTIVE STUDY FROM ELECTRONIC MEDICAL RECORDS (HEART-STRONG STUDY)
Author Block:	Ajit Mullasari, Prakadeesh Bharathi, Prachi Ahire, Chintan Khandhedia, Neeraj Markandeywar, Amey Mane, Mehta Suyog, Sun Pharma Laboratories Limited, Mumbai, India
Abstract Body:	**Background:** There has been a notable rise in atherosclerotic cardiovascular disease (ASCVD) in India with dyslipidemia being one of the main risk factors. ASCVD risk estimator plus is recommended for initial CVD risk assessment which helps to identify individuals with higher risk and optimizing treatment. This retrospective, observational, multicentre, electronic medical record (EMR) based study aimed to assess ASCVD risk of individuals. **Methods:** Aggregated and anonymised EMRs of patients aged 20-79 years, with total cholesterol (TC) 130-320 mg/dL, HDL 20-100 mg/dL and data available on diabetes mellitus and smoking status and hypertension treatment were used to calculate ASCVD Risk Scores by American College of Cardiology Risk Estimator Plus calculator. EMRs with current ASCVD and history of ASCVD were excluded. Primary endpoint was mean 10-year ASCVD risk. Here we present subgroup analysis of patients with dyslipidemia. **Results:** Of total EMRs of patients from 2017-2023, 4114 patients met eligibility criteria of which 2148 patients had dyslipidemia. Mean age was 57 years, BMI 27.1 kg/m^2 and 82.4% were males. Mean 10-year ASCVD risk score (n=1776) was 18.5% vs 16.6% in overall study population. Risk was high,

intermediate, borderline and low in 38.2% vs 32.6%, 35% vs 34.1%, 10.3% vs 11.9%, and 16.5% vs 21.3% in dyslipidemia vs overall patients respectively. Mean Lifetime risk (n=1266) was 54.4% and mean Optimal risk (n=2012) was 5.9%. Mean values of TC, LDL-C, HDL, VLDL, TG were 187.5 (n=2148), 106.4 (n=2057), 42.5 (n=2148), 29 (n=1142), and 191.3 (n=2003) mg/dL respectively. Atorvastatin 10, 20, 40 mg and Rosuvastatin 5, 10, 20, 40 mg; alone or in combination were prescribed to 39%, 8.6%, 0.7%, 12.4%, 34%, 3.8% and 0.2% patients respectively. Fenofibrate with statins was prescribed in 14% (292/2062) patients.

Conclusion: In this study among patients with dyslipidemia, 73.2% patients had high or intermediate risk of ASCVD. Despite higher risk levels, 73% patients received low intensity statins, mostly without add on treatments. There is urgent need for intensification of statins and aggressive dyslipidemia management in Indian patients.

Session Title:	**Saturday Afternoon Poster Session**
Session Time:	Saturday, May 10, 2025, 1:00 pm - 5:00 pm
Poster Board Number:	50
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	PREVALENCE OF FAMILIAL HYPERCHOLESTEROLEMIA AMONG FILIPINO PATIENTS WITH ACUTE CORONARY SYNDROME (ACS) IN A TERTIARY HOSPITAL IN THE PHILIPPINES
Author Block:	Martin Moses Sosa Yu, Chermaine Love Cañaveral, Sheena Tayag, Felix Eduardo Punzalan, Noemi Pestaño, Manila Doctors Hospital, Manila, Philippines
Abstract Body:	**Background:** Acute coronary syndrome (ACS) is a group of diseases where there is decreased blood flow to the heart which could be STEMI, NSTEMI or Unstable Angina. Familial hypercholesterolemia (FH) is considered to be one of the most commonly occurring congenital metabolic disorders, it is however treatable. The prevalence of FH is considerably higher among patients hospitalized for ACS compared with the general population, from three to 20-fold higher. There is a great lack of FH recognition in the general practice. In fact it is known that less than 1% of cases has been diagnosed in most countries. The diagnosis of FH can be simply be made by the Dutch Lipid Clinic Network Diagnostic Criteria (DLCNC). **Methods:** The patients admitted for ACS were identified as unlikely, possible, probable or definite score definition of FH using the DLCNC. Baseline characteristic and clinical outcomes were also noted among included patients. **Results:** Among 81 patients included in the study, the mean age (± SD) is 63.2 ± 12.88 years. There were more males (n = 52, 64.1%) compared to females (n = 29, 35.2%). The most common comorbidities include hypertension (n = 76, 93.8%), diabetes mellitus (n = 28, 34.5%) and dyslipidemia (n = 23, 28.3%). The mean LDL-C is 4.425 ± 1.06, TC at 4.72 ± 1.72933, HDL at 1.20 ±- 0.47 and

TG at 1.5 ± 0.99. The mean HbA1C among the patients is 6.66 ± 1.89. Of the 81 patients enrolled in the study had 54 (66.6%) who were unlikely FH, 19 (23.4%) were possible FH, and 8 (9.8%) were Probable/Definite FH. Some of the patients were already on statin use (n: 23, 28.3%). While on the management in these patients, majority or 44 (54.3%) underwent PCI while those on guideline-directed medical management were at 24 (29.6%).
Conclusion: The study showed that Probable/Definite FH , and Possible FH showed an increase number as compared to the current body of literature worldwide with the use of our DLCN scoring tool. The application of this screening tool is important and hence very valuable. Screening these patients will greatly impact care and further influence cost-effectiveness and is crucial in preventing further disease progression.

Sunday Flatboard Poster Presentations

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	01
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	LARGE-SCALE MULTICENTER ANALYSIS OF COMORBIDITY-DRIVEN OUTCOMES IN TAVR/TMVR: PAVING THE WAY FOR A RISK STRATIFICATION TOOL
Author Block:	Shonit Nandakumar, Aneeq Malik, Timothy D. Ho, Joseph Kraft, Patrick P. Hu, Riverside Community Hospital, Riverside, CA, USA
Abstract Body:	**Background:** With Transcatheter Aortic Valve Replacements (TAVR) and Transcatheter Mitral Valve Repair (TMVr) procedures becoming more common, it is prudent we understand the outcomes of these procedures associated with patients who have comorbid conditions like obesity, smoking habits, advanced age, and hyperlipidemia who are known to be at higher risk of developing heart failure (HF), myocardial infarction (MI) and strokes. This study looks at the outcomes of patients with these conditions who underwent TAVR and TMVr procedures. **Methods:** A retrospective analysis of 12,464 patients who presented to 184 hospitals from January 2020 to December 2022 and underwent TAVR or TMVr based on age, sex, smoker, BMI, COPD, prior MI, prior stroke, and HF, with outcomes reviewed as mortality, length of stay (LOS), readmission, and ICU admission. **Results:** Data was examined with Chi-square, ANOVA, and logistic regression analyses. Patients with a significantly higher mortality rate were found to be older ($p<.0016$), had a history of MI ($p<.0001$) and a prior stroke ($p<.0001$). Those with a significantly longer LOS were smokers by a factor of 1.11 days ($p<.007$), history of MI by 3.77 days ($p<.0001$), prior stroke by 1.30 days ($p<.0001$), and HF by a factor of 1.53 days ($p<.0001$). Males were found to have a longer length of ICU stay compared to females ($p<.0107$). Those with MI and HF were also found to have a longer length of ICU stay 25.9% more

and 3.9% respectively more than those with no disease.
Conclusion: The analysis of patients who underwent TAVR and TMVr procedures underscores the impact of pre-existing conditions, MI, stroke, HF, and smoking, on postoperative outcomes. Patients with these comorbidities faced significantly higher mortality rates, longer hospital stays, and increased ICU admissions. These findings highlight that while TAVR and TMVr are effective minimally invasive interventions, their success is heavily influenced by a patient's underlying health. This data lays a strong foundation for the development of targeted risk stratification tools, such as a risk score calculator, which could revolutionize patient triage and optimize clinical decision-making for these increasingly common procedures

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	02
Topic 1:	Multimodal Imaging and Valvular Diseases
Publishing Title:	PREVALENCE AND SIGNIFICANCE OF LEFT ATRIAL APPENDAGE SYSTOLIC FLOW REVERSAL IN ISOLATED SEVERE MITRAL REGURGITATION
Author Block:	Benjamin Tung, Tony Li, Tiong Cheng Yeo, William K. F. Kong, Kian Keong Poh, Ching Hui Sia, National University Heart Centre Singapore, Singapore, Singapore
Abstract Body:	**Background:** While pulmonary vein (PV) systolic flow reversal is a widely known and reported finding in severe mitral regurgitation (MR), less is known about left atrial appendage (LAA) systolic flow reversal. We aimed to assess the prevalence and significance of LAA systolic flow reversal in severe MR. **Methods:** We retrospectively studied a cohort of patients with suspected severe MR on transthoracic echocardiogram that underwent transesophageal echocardiogram (TEE) as part of assessment. All had analysis of their LAA and PV doppler images and clinical data was obtained from electronic medical records. Outcomes studied were all-cause mortality, heart failure hospitalization, mitral valve intervention, and their composite. **Results:** 81 out of 242 patients (mean age 57 years old, range 19 to 81 years old; 27% female) underwent TEE with valid LAA and PV data. Out of these, 82% had LAA systolic flow reversal, 72% showed systolic flow reversal in at least one PV. LAA systolic flow reversal was significantly associated with severe MR confirmed on TEE [59 out of 69 (86%) severe MR vs. 7 out of 12 (58%) non-severe MR patients had LAA systolic flow reversal (p-value=0.025)] and with PV systolic flow reversal (p-value=0.018). There were no significant differences in any of the individual outcomes or the composite in patients with or without LAA systolic flow reversal (mean follow-up duration 76.4 months, SD 40.6 months). **Conclusion:** LAA systolic flow reversal is a relatively common finding on TEE

and is significantly associated with severe MR. Larger cohort studies with severe MR could include LAA systolic flow reversal data to assess potential prognostic value.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	03
Topic 1:	Cardiac Arrhythmias
Publishing Title:	SUCH A QT - A CASE OF EPILEPSY MIMICKER IN LONG QT SYNDROME
Author Block:	Catherine Paul, Amala institute of medical sciences, Thrissur, Kerala, India
Abstract Body:	**Background:** Epilepsy can sometimes be mimicked in children by other organic conditions. We present a 11-year-old boy with the congenital long QT syndrome who had recurrent "seizures" for five years which had been treated as epilepsy. **Case:** Eleven-year-old presented with complaints of loss of consciousness following running in the playground in school. He lost consciousness almost immediately thereafter and was noticed to develop stiffness of the extremities. The episode terminated within a few minutes spontaneously. He regained full normalcy after a short time without any significant drowsiness or neurologic deficits. He complaints of giddiness while running occasionally. He had a history of seizure like activity at 1 year of age and was shows to a pediatrician and started on Antiepileptic drugs (AED). Last episode of epilepsy was at the age of 6 years and stopped AED at the age of 9 years. He used to have seizures about twice a year following crying and temper tantrums. He was the third child of a non-consanguineous parentage. His younger sisters are healthy. There was no history of seizures or sudden death in any close family members. He was not taking any medications other than carbamazepine. **Decision-making:** Patient was shown to a paediatrician and EKG done showed sinus rhythm with prolonged QT interval and was referred to a cardiology for further evaluation. He was subjected to exercise test on

treadmill and serial ECGs done showed tachycardia with prolongation of QT interval (maximum of 750msec), patient had to stop the treadmill test due to dizziness. Patient was defined as definite long QT syndrome as per the diagnostic criteria for long QT syndrome (Schwartz-score). Echocardiography showed no structural abnormality. Propranolol was started in a small dose. Genetic testing among family members have been advised.

Conclusion: The presence of a prolonged QT interval and notched T wave in resting ECG and prolongation of QT interval following exercise testing confirms the diagnosis of the Long QT syndrome. This possibility should be considered by health care professionals who sees a child with seizures or recurrent syncope.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	04
Topic 1:	Cardiac Arrhythmias
Publishing Title:	BRIDGING THE GAP: COMPLETE HEART BLOCK IN PREGNANCY AND SUCCESSFUL POSTPARTUM PACEMAKER MANAGEMENT
Author Block:	Muhammad Asad Khan, Hefz Ur Rahman, Muhammad Luqman, Muhammad Maaz Bin Zahid, Hafsa Nasir Ud Din, Muhammad Tufail Jan, Hayatabad Medical Complex, Peshawar, Pakistan
Abstract Body:	**Background:** Complete heart block (CHB) during pregnancy is rare but life-threatening, with significant risks for both mother and fetus, requiring prompt recognition and intervention. Limited guidelines for arrhythmia screening highlight the need for systematic evaluation of unexplained symptoms. **Case:** A 26-year-old woman, G1P0 at 39 weeks gestation, presented with symptomatic CHB during labor, including dizziness and presyncope. Comprehensive evaluations ruled out autoimmune, structural, or metabolic causes, leading to a diagnosis of idiopathic CHB. A temporary pacemaker (TPM) was placed, followed by an emergency cesarean section. Postpartum, persistent CHB required permanent pacemaker implantation, ensuring maternal stability. **Decision-making:** Early CHB recognition via symptoms and ECG was critical. Early screening and multidisciplinary care are crucial to optimizing maternal and neonatal outcomes. Postpartum permanent pacing emphasized idiopathic CHB as a distinct entity. This case highlights the need for standardized protocols for arrhythmia screening in pregnancy. **Conclusion:** This case underscores the challenges of managing idiopathic CHB during pregnancy, highlighting the critical role of early recognition, comprehensive evaluation, and timely pacing interventions in achieving optimal outcomes. The absence of autoimmune or structural causes demands

further research to bridge knowledge gaps, enhance guidelines, and improve maternal and neonatal care.

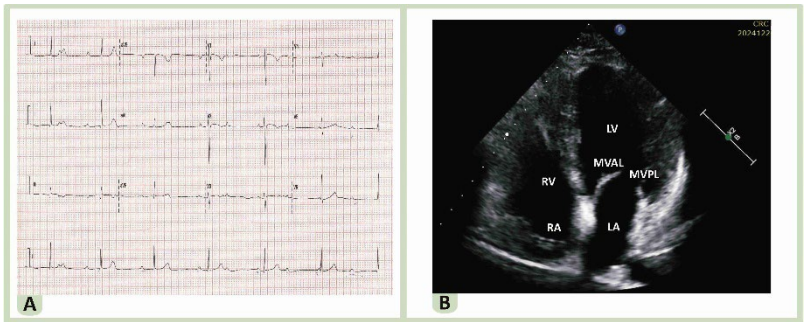


Figure 1A: ECG showing complete heart block with AV dissociation.
Figure 1B: Normal transthoracic echocardiography without structural abnormalities.

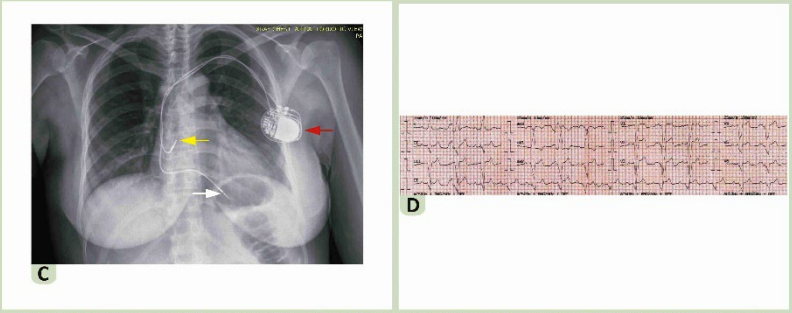


Figure 1C: Post-pacemaker implantation chest X-ray demonstrating proper positioning of the pacemaker device (red arrow) right atrial lead (yellow arrow), and right ventricular lead (white arrow) without evidence of complications.
Figure 1D: Post-pacemaker implantation ECG demonstrating paced ventricular rhythm.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	05
Topic 1:	Cardiac Arrhythmias
Publishing Title:	SUDDEN DEATH RISK OF VENTRICULAR TACHYCARDIA INDUCED BY ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY IN A YOUNG MALE
Author Block:	Dinda Feraliana, Syiah Kuala University, Banda Aceh, Indonesia, Zainoel Abidin Hospital, Banda Aceh, Indonesia
Abstract Body:	**Background:** Arrhythmogenic right ventricular cardiomyopathy/dysplasia (ARVC/D) is a leading cause of sudden cardiac death (SCD) in young people and athletes, characterized by creates scar tissue that can trigger reentrant ventricular tachycardias and increase the risk of SCD **Case:** A 27-year-old man presented to the emergency room with palpitations and fatigue. He had a decade-long history of manageable palpitations, with no significant family history of cardiac diseases. On examination, he had a pulse 231 bpm, blood pressure 86/58 mmHg, and an oxygen saturation 98%. The initial ECG revealed sustained monomorphic ventricular tachycardia (SMVT), superior axis, left bundle branch block. Following cardioversion, the ECG showed sinus tachycardia, inverted T waves, left axis deviation, incomplete right bundle branch block and epsilon waves in leads V1-V2. Echocardiography indicated right ventricular dilation 34 cm, akinetic free wall, and abnormal septal movement. The patient received oral beta-blockers and was referred for further evaluation **Decision-making:** Arrhythmogenic right ventricular cardiomyopathy (ARVC) involves gene mutations that lead to progressive myocyte loss and fibrofatty replacement, resulting in reentrant ventricular tachycardias. ARVC occurs in approximately 0.02% of the population, primarily affecting young adults. This patient exhibited typical monomorphic ventricular tachycardia, superior axis,

and left bundle branch block morphology. Diagnosis was supported by echocardiographic findings of right ventricular dilation and akinetic free wall, along with characteristic ECG changes. Treatment primarily involves beta-blockers to reduce arrhythmia risk and improve heart failure symptoms, with implantable cardioverter-defibrillators (ICDs) being crucial in preventing SCD
Conclusion: ARVC is a rare cause of ventricular arrhythmias and SCD in young adults. Effective management requires a comprehensive approach, with beta-blockers key in controlling arrhythmias and mitigating SCD risk

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	06
Topic 1:	Cardiac Arrhythmias
Publishing Title:	MADNESS IN THE INDIAN POPULATION: PREVALENCE OF ARRHYTHMOGENIC MITRAL ANNULAR DISJUNCTION IN A TERTIARY CARE HOSPITAL
Author Block:	Gopala krishna Medarametla, Surender Deora, Rahul Choudhary, Atul Kaushik, Narendra Bordiya, Shekhar Angirekula, Ankit kumar Yadav, kuldeep Gaur, keshav pathak, Aasish Kumar Singh, AIIMS JODHPUR, JODHPUR, India
Abstract Body:	**Background:** Mitral annular disjunction (MAD) is an emerging structural abnormality with significant arrhythmogenic potential. This study investigates the prevalence of MAD and its clinical implications in a cohort of Indian patients. **Methods:** A cross-sectional observational study was conducted among patients presenting to the cardiology outpatient department over one month. Of the 5345 individuals screened for palpitations, 2735 underwent echocardiographic assessment for mitral valve prolapse (MVP) and MAD. Patients diagnosed with MAD underwent 48-hour Holter monitoring to evaluate arrhythmic burden. **Results:** MAD was identified in 10 patients, representing a small but significant subset of those with MVP (n=85). Most patients with MAD had grade II mitral regurgitation and bi-leaflet MVP (80%). The mean disjunction distance was 9.4 mm, and the Pickelhaube sign was observed in 70% of cases. Arrhythmic events were frequent, with NSVT seen in 80% of MAD patients and an average VPC burden of 5%. ECG changes of T wave inversion in inferior leads were seen in 8 patients. **Conclusion:** These findings of the high prevalence of MAD underscore the importance of systematic evaluation for MAD in patients with MVP to guide clinical management and risk stratification.

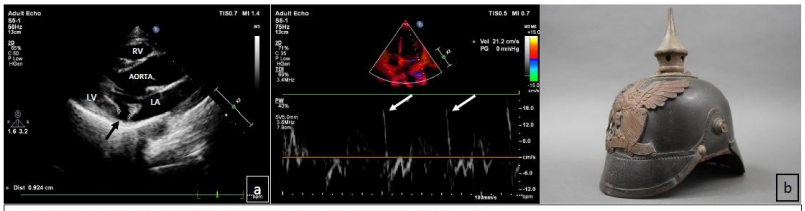


Figure a: PLAX view suggestive of mitral annular disjunction distance 0.924cm (Black arrow).
Figure b: Tissue doppler imaging suggestive of high lateral tissue velocity resembling pickelhaube helmet (White arrows).
LA: Left atrium; LV: Left ventricle; RV: Right ventricle.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	07
Topic 1:	Cardiac Arrhythmias
Publishing Title:	NATURAL COURSE OF ATRIAL FIBRILLATION IN POST CRYPTOGENIC STROKE: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Ponthakorn Kaewkanha, Patavee Pajareya, Somkiat Phutinart, Noppachai Siranart, Narut Prasitlumkum, Ronpichai Chokesuwattanaskul, Center of Excellence in Arrhythmia Research, Faculty of Medicine, Chulalongkorn university, Bangkok, Thailand
Abstract Body:	**Background:** The clinical relevance of atrial fibrillation (AF), incidentally detected in patients with cryptogenic stroke (CS), remains equivocal. **Methods:** Our study was conducted in a systematic review and meta-analysis design. The objectives were to explore the association between predictors and silent AF incidence, as well as clinical differences between AF and non-AF patients following CS. **Results:** This meta-analysis included 60 studies with 18683 patients with CS (59 cohort study, and 1 case-control study). AF incidence was 26.2% (95% CI: 21.7%-31.6%, I^2=1%, p<0.001). In multivariable analysis, elderly (HR 2.17, 95% CI: 1.35-3.47, I^2=0%, p=0.020), heart failure (OR 3.40, 95% CI: 2.38-4.88, I^2=0%, p=0.005), hypertension (OR 1.88, 95%CI: 1.06-3.34, I^2=0%, p=0.038) were associated with higher incidence of silent AF. In comparison to non-AF group, individuals with AF showed significantly higher levels of left atrial volume index (MD 18.09 mL/m^2, 95%CI: 4.94-66.26, I^2=0%, p<0.001), left atrial diameter (MD 1.18 cm, 95%CI: 1.02-1.37, I^2=48.6%, p=0.031), and CHA_2DS_2VASc score (MD 2.13, 95%CI: 1.70-2.67, I^2=64.2%, p<0.001). The mean time from CS to AF detection was 162 days (95% CI: 41.70-629.36, I^2=99.5%, p<0.001), and from cardiac monitoring to AF detection was 49.38 days (95% CI: 25.86-94.32, I^2=99.9%, p<0.001).

Conclusion: Our study highlighted criticality in long-term arrhythmias surveillance post cryptogenic stroke and the potential link between certain comorbidities.

Table 1: Predictors of silent atrial fibrillation measured by odd ratios.

Outcome	Subgroup	Univariable				Multivariable			
		k	I^2	OR (95% CI)	p-value	k	I^2	OR (95% CI)	p-value
Biomarkers	Overall	8	80.2% (p<0.001)	2.160 (1.084-4.304)	0.033	7	52.2% (p=0.051)	1.189 (0.885-1.596)	0.201
	NT-proBNP	4	87.8% (p<0.001)	2.973 (0.677-13.048)	0.101	3	33.7% (p=0.221)	1.549 (0.448-5.355)	0.268
	BNP					4	43.8% (p=0.149)	1.091 (0.789-1.510)	0.455
Echo	Overall	42	96.4% (p<0.001)	1.042 (0.932-1.166)	0.460	45	30.0% (p=0.032)	1.018 (0.943-1.100)	0.635
	LVEF	5	0.0% (p=0.644)	0.963 (0.862-1.076)	0.399	3	38.7% (p=0.196)	1.096 (0.582-2.066)	0.596
	E/e'	3	0.0% (p=0.527)	1.091 (0.597-1.992)	0.598				
	LAVI	6	99.2% (p<0.001)	1.317 (0.780-2.224)	0.235	5	0.0% (p=0.950)	1.041 (0.948-1.144)	0.298
	LA εR	4	35.4% (p=0.200)	0.844 (0.435-1.640)	0.477	5	68.5% (p=0.013)	0.980 (0.481-1.997)	0.940
	LA diameter	3	0.0% (p=0.741)	2.277 (1.105-4.693)	0.039	6	0.0% (p=0.435)	1.106 (0.805-1.518)	0.453
	GLS	3	18.7% (p=0.292)	0.914 (0.610-1.370)	0.441	3	0.0% (p=0.739)	0.818 (0.546-1.223)	0.164
	LAA-FV					3	46.6% (p=0.154)	1.067 (0.530-2.147)	0.730
	LA εCt					3	70.2% (p=0.035)	0.828 (0.394-1.739)	0.388
Demographic	Overall	60	0.0% (p=0.992)	1.050 (1.033-1.067)	<0.001	55	13.1% (p=0.209)	1.120 (1.031-1.216)	0.008
	Age	13	29.7% (p=0.147)	1.048 (1.021-1.076)	0.002	17	25.4% (p=0.162)	1.060 (0.990-1.136)	0.089
	Female	7	0.0% (p=0.997)	1.119 (0.919-1.363)	0.212	9	25.3% (p=0.218)	1.046 (0.832-1.315)	0.660
	Hypertension	10	0.0% (p=0.973)	1.983 (1.451-2.708)	<0.001	5	0.0% (p=0.611)	1.879 (1.058-3.337)	0.038
	DM	5	0.0% (p=0.804)	1.508 (0.804-2.828)	0.144				
	Dyslipidemia	4	0.0% (p=0.598)	1.075 (0.405-2.850)	0.830				
	Smoking	4	0.0% (p=0.830)	0.740 (0.360-1.521)	0.276	3	0.0% (p=0.671)	0.482 (0.051-4.579)	0.298
	Heart failure	4	0.0% (p=0.694)	2.055 (0.548-7.702)	0.181	3	0.0% (p=0.888)	3.404 (2.376-4.876)	0.005
	Stroke					3	0.0% (p=0.666)	3.298 (0.696-15.630)	0.081
ECG	Overall	5	61.6% (p=0.034)	1.362 (0.699-2.656)	0.268	5	70.1% (p=0.010)	2.407 (0.747-7.752)	0.105
	PAC					4	75.3% (p=0.007)	3.017 (0.534-17.052)	0.136
Score	Overall	7	26.2% (p=0.229)	1.287 (1.063-1.559)	0.018	3	0.0% (p=0.494)	1.461 (0.966-2.209)	0.059

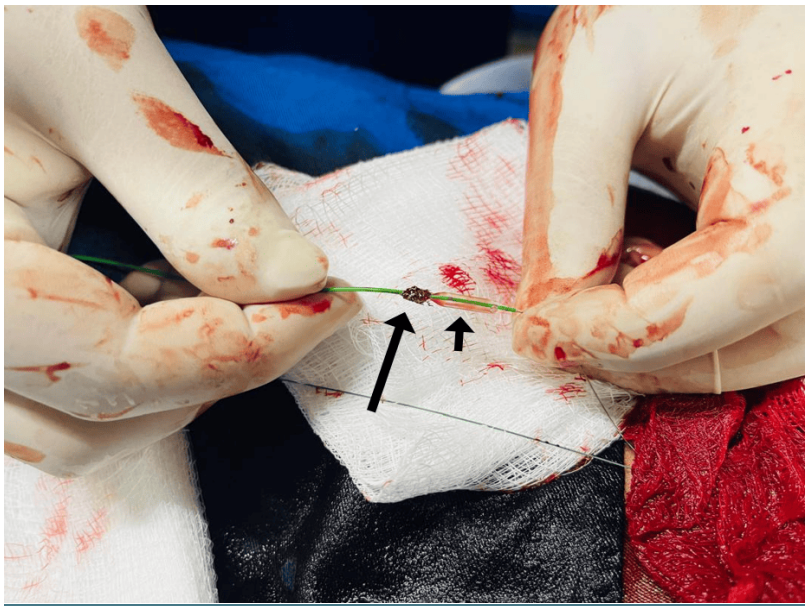
BNP, B-type natriuretic peptide; CI, confidence interval; DM, diabetes mellitus; ECG, electrocardiography; E/e', ratio between early mitral inflow velocity and mitral annular early diastolic velocity; Echo, echocardiography; GLS, global longitudinal strain; HR, hazard ratio; LA, left atrial; LAVI, left atrial volume index; LA εR, left atrial reservoir strain; LAA-FV, left atrial appendage flow velocity; NT-proBNP, N-terminal pro B-type natriuretic peptide; OR, odd ratio; PAC, premature atrial complex

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	08
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	OCCLUSIVE MYOCARDIAL INFARCTION IN A YOUNG MALE SECONDARY TO PARADOXICAL EMBOLISM
Author Block:	SOE MIN MAUNG, May Wathan Aung, Gede Sumantra, Muhammad Asif, Rajinikanth Rajagopal, Raja Isteri Pengiran Anak Saleha Hospital, Bandar Seri Begawan, Brunei Darussalam, Gleneagles JPMC, Bandar Seri Begawan, Brunei Darussalam
Abstract Body:	**Background:** A young male presenting with myocaridal infarction in the context of a de Winter ECG pattern and the subsequent discovery of a PFO. **Case:** A healthy young male was presented to emergency department after he developed typical chest pain with nausea during swimming for 15 minutes. The patient has no risk factors for ACS. He was vitally stable and physical examinations were within normal limits. The admission ECG showed de Winter pattern ECG. Bedside echocardiography showed hypokinesia on LAD territory with EF 40% visually. Urgent CAG revealed total occlusion of proximal LAD and complete resolution after thrombectomy; no significant coronary stenosis. Further evaluation prompted by the patient's young age & lack of risk factors, included trans-esophageal echo revealed a PFO. This finding raised the possibility of paradoxical embolism as the cause of the LAD occlusion. **Decision-making:** This case underscores the importance of considering atypical etiologies for myocardial infarction in young healthy individuals without risk factors. The de Winter ECG pattern served as a critical clue for timely diagnosis and intervention. The PFO identified as a potential source of paradoxical embolism likely contributed to the LAD occlusion. Paradoxical embolism occurs when venous thrombi bypass the pulmonary circulation through a PFO & enter systemic circulation leading to arterial occlusions.

Given the increase risk of recurrent embolic events especially in the presence of a PFO, closure should be considered. Given the potential for recurrent embolic events, elective PFO closure was planned after MDT meeting.
Conclusion: This case highlights on recognizing the de Winter ECG pattern and investigating for underlying causes such as PFO. Early identification and management of PFO can prevent future embolic events underscoring its clinical significance.

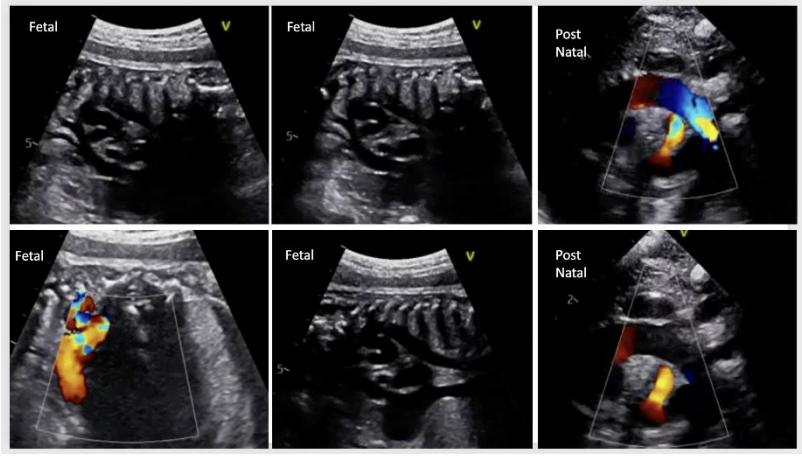
Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	09
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	STENT DISLODGEMENT IN THE LEFT MAIN CORONARY ARTERY AND COMPLICATION MANAGEMENT DURING LEFT CIRCUMFLEX ARTERY PCI: A CHALLENGING CASE REPORT FROM KABUL
Author Block:	Noor Ahmad Jamal, Christian Sanchez, Qadir Nawabi, Aya Ziq, Jamshed Rezaie, Mellat Medical Center, Kabul, Afghanistan
Abstract Body:	**Background:** Coronary stent dislodgement, though rare, is a serious PCI complication with risks like thrombosis, embolization, and myocardial infarction. Early recognition and management are crucial to prevent fatal outcomes. **Case:** A 70-year-old male with double vessel coronary artery disease underwent PCI for the left circumflex artery (LCX) in Kabul, Afghanistan. His medical history included smoking and hypertension. During PCI, the stent dislodged in the left main coronary artery while crossing a calcified LCX lesion. Attempts to retrieve it caused distal migration. Using a second guidewire and balloon-assisted technique, the stent was retrieved via the external iliac artery. A sheath exchange enabled successful removal. **Decision-making:** To minimize embolization and vessel damage, minimally invasive retrieval techniques were employed. A smaller balloon initially failed, but a second guidewire with a larger sheath allowed safe extraction. PCI was then completed with successful stent placement in the LCX and second diagonal branch. **Conclusion:** This case underscores the challenges of PCI in resource-limited settings and highlights the importance of technical expertise and adaptive strategies in managing stent dislodgement. Reporting such cases offers

insights for improving procedural outcomes.



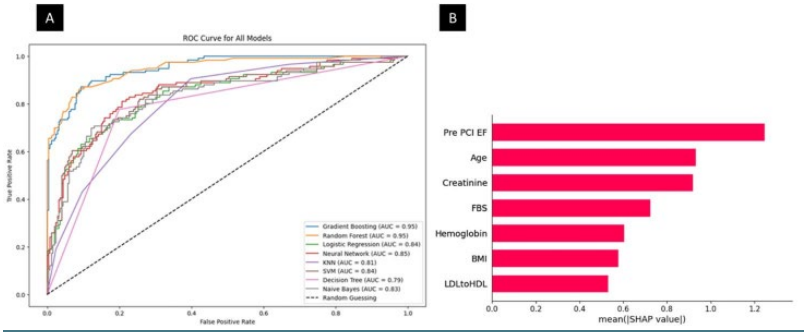
Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	10
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	EXTREMELY TORTUOUS FETAL DUCTUS ARTERIOSUS WITH SERPENTINE APPEARANCE
Author Block:	Uma Devi Karuru, Naveen T, Mysore Sai Kumar, Ashirbad Parhi, Sadanand Reddy Tummala, Kiran Kumar Kanjerla, ESIC Medical College and Superspeciality Hospital, Hyderabad, India
Abstract Body:	**Background:** Ductal aneurysms are rare vascular anomalies, often associated with conditions like Marfan, Loeys-Dietz, or Ehlers-Danlos syndromes. Smaller aneurysms are usually asymptomatic, while larger ones may cause respiratory distress, feeding issues, or vascular compression of nearby structures. In fetal life, they can mimic congenital heart defects, complicating diagnosis. We report a case of an isolated, asymptomatic, highly tortuous ductus arteriosus with a serpentine appearance. **Case:** A 35-year-old gravida 2, live 1 patient at 35+3 weeks gestation presented with a prenatal diagnosis of a ductal aneurysm above the 95th percentile for gestational age, with the aortic arch at the 3rd percentile, resembling a hypoplastic aorta. Fetal echocardiography showed no other anomalies, hydrops, or cardiac compromise. Suspected etiology was antenatal paracetamol use for a viral infection. The patient was managed conservatively with serial ultrasounds. **Decision-making:** After an uneventful term delivery, neonatal echocardiography at 8 hours showed a moderate tubular PDA with normalized aortic arch dimensions. By day 3, repeat imaging confirmed spontaneous PDA closure without residual aneurysmal dilatation.. **Conclusion:** This case highlights the need for detailed fetal cardiac assessment and multidisciplinary care in ductal aneurysms. Despite severe

antenatal findings, the aneurysm resolved spontaneously postnatally, supporting conservative management in isolated cases.



Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	11
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	IDENTIFYING HIGH-RISK ELDERLY PATIENTS AFTER PCI: MACHINE LEARNING-BASED RISK STRATIFICATION MODELS
Author Block:	Amir Ghaffari Jolfayi, Amir Nasrollahizadeh, Ali Nasrollahizadeh, Amir Azimi, Homayoun Pishraft-Sabet, Mehdi Mehrani, Kaveh Hosseini, Hamidreza Soleimani, Tehran Heart Center, Tehran, Iran (Islamic Republic of)
Abstract Body:	**Background:** Major Adverse Cardiac Events (MACE) following Percutaneous Coronary Intervention (PCI) represent a significant cause of morbidity and mortality in the elderly. Accurate 1-year MACE prediction is challenging due to the complexity of comorbidities. **Methods:** We conducted a retrospective cohort study of elderly patients (≥65 years) undergoing PCI, using machine learning (ML) models to predict 1-year MACE. Data preprocessing included z-score normalization for standardizing continuous variables and synthetic minority oversampling technique regarding data imbalance. The dataset (80% training, 20% testing) was evaluated with various ML models. Shapley Additive Explanations (SHAP) analysis was conducted to interpret model predictions. **Results:** Among 1355 patients, 152 (11.2%) experienced MACE. Random Forest (AUC: 95.3%) and XGBoost (AUC: 95.1 %) outperformed other ML models. SHAP analysis revealed lower ejection fraction, older age, elevated creatinine, and fasting glucose as major risk factors. **Conclusion:** ML, particularly XGBoost and Random Forest, accurately predicted 1-year MACE. Identified key features underscore the importance of metabolic and clinical marker monitoring to improve elderly PCI patient

outcomes.


A
ROC Curve for All Models
True Positive Rate
False Positive Rate
Gradient Boosting (AUC = 0.95)
Random Forest (AUC = 0.95)
Logistic Regression (AUC = 0.84)
Neural Network (AUC = 0.85)
KNN (AUC = 0.81)
SVM (AUC = 0.84)
Decision Tree (AUC = 0.79)
Naive Bayes (AUC = 0.83)
Random Guessing
B
Pre PCI EF
Age
Creatinine
FBS
Hemoglobin
BMI
LDLtoHDL
mean(|SHAP value|)

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	12
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	TRANSCATHETER MANAGEMENT OF PROGRESSIVE HEART FAILURE DUE TO MITRAL PROSTHETIC FAILURE WITH PARAVALVULAR LEAK CLOSURE: A CASE REPORT
Author Block:	Saqlain Anwar, Muhammad Raza Sarfraz, Nadeem Sadiq, PNS Shifa Hospital, Karachi, Pakistan

Abstract Body:

Background: Although surgical repair achieves better paravalvular leak reduction, it is associated with increased early morbidity and mortality compared to percutaneous repair. We present a case of successful transcatheter mitral valve repair in a high-risk surgical patient

Case: A 28-year-old female with two previous mitral valve replacements presented with NYHA Class IV heart failure, severe dyspnea, tachycardia, anemia, and jaundice. TEE revealed significant PVL on TEE (fig 1A)

Decision-making: Considering the patient's high surgical risk profile, a transcatheter approach was deemed optimal. The intervention strategy comprised transseptal puncture under TEE guidance, followed by arteriovenous loop formation to ensure stable device positioning. A 12/10 Multifunctional Occluder device was deployed via a dedicated delivery system. Post-intervention surveillance demonstrated complete PVL resolution on serial TEE examinations, with successful clinical recovery by day 10 (fig 1B)

Conclusion: We successfully treated progressive heart failure in a young patient with mitral prosthetic PVL through transcatheter intervention. Pre-procedural planning and comprehensive follow-up care were essential for optimal outcomes. The procedural approach should be guided by clinical factors and institutional expertise

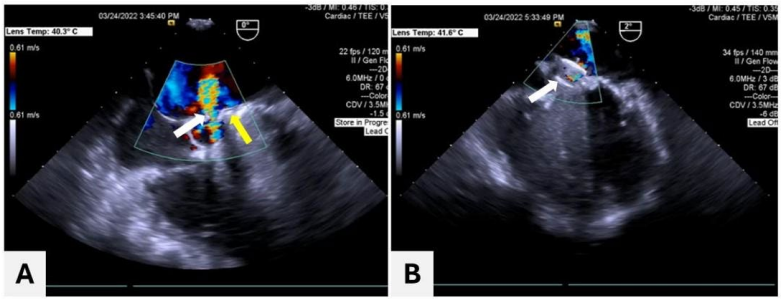


Figure 1. Transesophageal echocardiography (TEE) of the patient (A) Pre-procedure TEE showing a mitral paravalvular leak (white arrow) prosthetic mitral valve (yellow arrow). Post-procedure TEE showing the well-positioned MFO device at the mitral area with no evidence of leakage (white arrow).

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	13
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	STAGED AORTO-OSTIAL RCA STENTING IN TYPE II AORTIC-OSTIAL DISSECTION
Author Block:	Saikarthik Kowtarapu, Ramachandra Barik, Saroj Kumar Sahoo, Debasis Acharya, Saran P Mohanan, Sindhu Rao Malla, Pranjit Deb, Debasis Panda, Subhas Pramanik, Melvin Baby, ALL INDIA INSTITUTE OF MEDICAL SCIENCES,BHUBANESWAR, BHUBANESWAR, India
Abstract Body:	**Background:** Case of type-II Iatrogenic aorto-ostial dissection(IAOD) with staged aorto-ostial RCA stenting. **Case:** 44yr male complains of angina since 3 months,ECG:T inversions in V4-V6, CAG:LMCA-Normal,LAD-mild plaque, LCX: Proximal 90% focal stenosis, RCA;long segment disease from ostium to mid RCA with maximum 80% stenosis proximally. Patient was planned for PCI to RCA and LCX. On engaging a upward take off RCA with 6F JR 3.5 guide, contrast injection revealed aortic dissection from RCA ostium to ascending aorta. Patient was hemodynamically stable. An attempt was made to close the dissection by stenting RCA, but guide was engaging into false lumen so as guide wire passing into it instead of repeated attempts. RCA angioplasty was abandoned and only LCX angioplasty done. . Follow up angiogram after 1 month shows resolution of most of aortic dissection and minimal dissection around RCA ostium.This time RCA angioplasty was done successfully and dissection was significantly resolved. **Decision-making:** Even after diagnosing type II aorto-ostial dissection, we decided to stent LCX as LMCA is still preserved. which is a challenging scenario so as to have a back up if RCA is completely occluded. **Conclusion:** Increased risk of aorto-coronary dissection is linked to unusual

coronary anatomy, Atheromatous plaque at origin, extensive catheter manipulations. Conservative management can be done in type I and II IAOD monitoring patient closely.

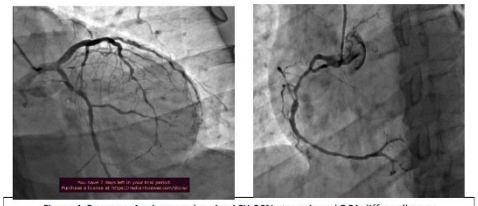


Figure 1:Coronary Angiogram showing LCX-90% stenosis and RCA diffuse disease

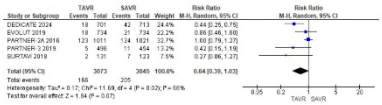
Figure 2: Aorto-ostial dissection extending into Ascending Aorta

Figure 3: RCA angioplasty was successful and Aorto-ostial dissection was significantly reduced

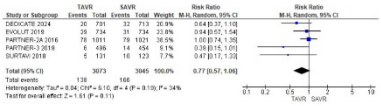
Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	14
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	TRANSCATHETER AORTIC VALVE REPLACEMENT VERSUS SURGICAL AORTIC VALVE REPLACEMENT IN LOW-TO-MODERATE SURGICAL RISKPATIENTS WITH AORTIC STENOSIS: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS
Author Block:	Hritvik Jain, Dhruvi Joshi, Ramez M. Odat, Jagjot Singh, NANDAN PATEL, Jyoti Jain, Raheel Ahmed, Surender Deora, All India Institute of Medical Sciences, Jodhpur, Jodhpur, India, Narendra Modi Medical College and Sheth L.G. Hospital, Ahmedabad, Ahmedabad, India
Abstract Body:	**Background:** The current literature comparing TAVR and SAVR in aortic stenosis (AS) patients with a low-to-moderate surgical risk population is limited. **Methods:** Major electronic databases were searched for randomized controlled trials (RCTs) comparing TAVR with SAVR in patients with severe AS with a low-to-moderate surgical risk.Risk ratios (RR) with corresponding 95% confidence intervals (CI) were pooled using a random effects model. **Results:** 5 RCTs with 6118 patients with AS (3073 TAVR and 3045 SAVR) were included. TAVR was associated with a lower risk of major or life-threatening bleeding [RR: 0.32; 95% CI: 0.21, 0.51; p<0.00001] and cardiovascular mortality [RR: 0.68; 95% CI: 0.48, 0.96; p=0.03]. TAVR was also associated with an increased risk of new permanent pacemaker (PPM) implantation [RR: 2.00; 95% CI: 1.26, 3.17; p=0.003], major vascular complications [RR: 2.44; 95% CI: 1.13, 5.28; p=0.02], and moderate-to-severe paravalvular leak [RR: 4.17; 95% CI: 1.99, 8.75; p=0.0002]. TAVR demonstrated an insignificant trend toward reduction in all-cause mortality, stroke, and MI. **Conclusion:** TAVR demonstrates superior outcomes to SAVR in terms of major or life-threatening bleeding and cardiovascular mortality; however, SAVR is

better in terms of new PPM implantation, major vascular complications, and moderate-to-severe paravalvular leak. No significant differences were noted for all-cause mortality, stroke, and myocardial infarction between the two groups.

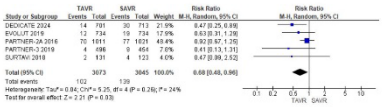
A. All-cause mortality:



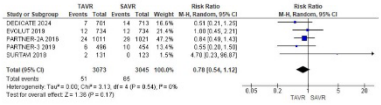
B. Stroke:



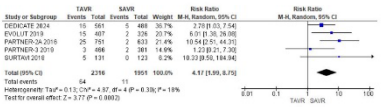
C. Cardiovascular mortality:



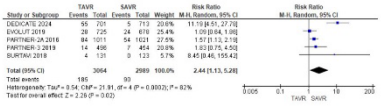
D. Myocardial Infarction:



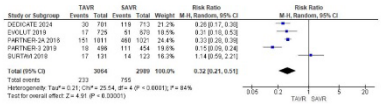
E. Moderate to severe paravalvular leak:



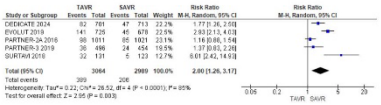
F. Major vascular complications:



G. Major or life-threatening bleeding:



H. New permanent pacemaker implantation:



Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	15
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	ACUTE INTESTINAL ISCHEMIA- ULTRA LOW CONTRAST REVASCULARIZATION
Author Block:	ASHWANI Kumar SHARMA, Fortis Escorts hospital, Jaipur, India
Abstract Body:	**Background:** A 75-year-old gentleman had abdominal pain, progressive distension and constipation for 4 days. After excessive laxative consumption and enema, he had profuse diarrhea and was admitted with hypotension. Bowel sounds were absent. **Case:** He had acute renal injury with creatinine of 8.0 mg%. Echocardiographic study was unremarkable. Despite multidisciplinary treatment he had non-resolving abdominal pain and distension. Contrast enhanced CT abdomen was performed which revealed acute intestinal ischemia with tight stenosis in ostioproximal celiac trunk (CT) and superior mesenteric artery (SMA). Inferior mesenteric artery (IMA) was normal still there was diffuse wall thickening in sigmoid colon and rectum. **Decision-making:** As the mesenteric ischemia was not responding to conservative management, intervention was planned at creatinine of 4.1 mg%. Low contrast angiogram was performed using 4 cc contrast for SMA and CT in lateral view only. It revealed 50% stenosis in SMA and 70% stenosis in CT (masked by large splenic artery). Further assessment of SMA and CT revealed significant stenosis. IVUS guided zero contrast intervention was performed in SMA followed by in CT. The pre dilatation and stenting was performed through right femoral under live IVUS advanced through left femoral without using additional dye. He was maintained on total parenteral nutrition (TPN). His abdomen became relatively soft but pain and tenderness

was not resolving so colonoscopy guided decompression was performed. There was confluent mucosal necrosis in colonoscopy. Repeat contrast CT reveled no perforation, patent stents, normal IMA and similar rectosigmiod involvement. Possibility of non-obstructive injury in this region was considered and conservative treatment was continued. He responded well to the treatment requiring and recovered completely.

Conclusion: Dianosis of acute mesenteric ischemia is often delayed until CT gives clue. Management of acute mesenteric ischemia with AKI is challenging- ULCPTA is an option. It may be associated with ‘compartment syndrome’ &/or ‘hypotension related border zone infarction’ leading to non-ischemic injury in recto-sigmoid region.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	16
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	NEOSTIGMINE-INDUCED CORONARY ARTERY SPASM MIMICKING ACUTE MYOCARDIAL INFARCTION: A RARE AND UNDERRECOGNIZED ADVERSE EFFECT
Author Block:	Dhruvi Joshi, kalpesh B. joshi, Lotus Hospital, Valsad, Valsad, India
Abstract Body:	**Background:** Neostigmine is an anticholinesterase agent, and by increasing acetylcholine levels, it can rarely cause coronary artery spasm, one of its under recognised and rare adverse effect. **Case:** A 65-year-old male underwent a neostigmine test (1.5 mg IM) for myasthenia gravis after atropine preloading. His ptosis improved, indicating a positive test. Fifteen minutes later, he developed chest pain, diaphoresis, bradycardia, and transient ventricular tachycardia. ECG revealed ST elevation in inferolateral leads, and 2D echocardiography showed regional wall hypokinesia. Within 10 minutes, the ST-T changes and wall motion abnormalities resolved. Troponin T levels were normal, and coronary angiography confirmed normal coronary arteries. **Decision-making:** Transient ST elevation, reversible hypokinesia, and normal troponin levels pointed to neostigmine-induced coronary vasospasm. The mechanism likely involved acetylcholine-mediated coronary spasm and enhanced parasympathetic stimulation. Recognition of this complication avoided unnecessary thrombolysis. **Conclusion:** Neostigmine-induced coronary artery spasm can mimic acute myocardial infarction. Awareness of this rare complication is essential to ensure accurate diagnosis and prevent unwarranted interventions.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	17
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	THE PREDICTIVE VALUE OF THE POST-PCI MICROVASCULAR RESISTANCE OF THREE VESSELS IN NON-ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION PATIENTS
Author Block:	Ruijin Hong, Jiaxin Zhong, Yuanming Yan, Beilei Li, Hui Chen, Qin Chen, Yukun Luo, Department of Cardiology, Fujian Medical University Union Hospital, Fuzhou, China, Department of Emergency, Fujian Medical University Union Hospital, Fuzhou, China
Abstract Body:	**Background:** Quantitative Flow Radio(QFR) is a functional analysis tool to calculate Fractional Flow Radio (FFR) of the coronary artery. Angle-based Microvascular Resistance(AMR) is a parameter in QFR analysis results that reflects the microvascular function of coronary arteries. We investigated the predictive value of the average microvascular resistance of three vessels for the prognosis of non-ST-segment elevation myocardial infarction(NSTEMI) patients after percutaneous coronary intervention (PCI). **Methods:** Patients with NSTEMI underwent PCI were included in this study. QFR analysis was conducted on all patients yielding postoperative QFR and AMR data for three main vessels.All enrolled patients were divided into two groups according to whether the post-PCI average microvascular resistance of the three main vessels(3VA-AMR) reached the standard of coronary microvascular dysfunction (CMD): high 3VA-AMR group and low 3VA-AMR group. The primary outcome was 2-year major adverse cardiac events (MACE), including cardiovascular death, myocardial infartion and revascularization. **Results:** A total of 290 patients were included in the final analysis. Compared with the low 3VA-AMR group, the high 3VA-AMR group had higher 3-vessel-

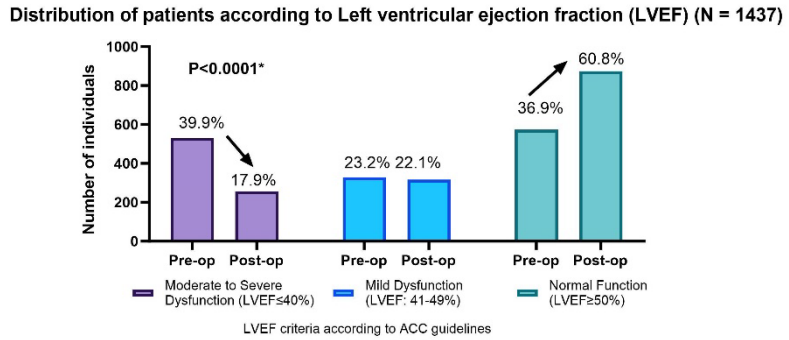
average Quantitative Flow Ratio (3VA-QFR) [0.920.05 vs. 0.880.09, P0.001], higher 3VA-AMR [291.4859.76 vs. 202.6534.88, P0.001]. The incidence of 2-year MACE was significantly higher in the high 3VA-AMR group than in the low 3VA-AMR group [21.90% vs. 10.27%, P=0.007]. Univariate and multivariate logistics regression analysis confirmed that 3VA-AMR was independently associated with 2-year MACE (OR:1.010, 95% CI:1.004-1.015, P=0.001). Receiver-operating characteristic (ROC) curve analysis showed 3VA-AMR and MACE correlation (area under the curve: 0.701, P0.001). And the prediction ability can be improved by combining with traditional prediction factors(area under the curve: 0.749, P0.001).

Conclusion: 3VA-AMR ≥250 mmHg*s/m was an independent risk factor and 3VA-AMR has good predictive

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	18
Topic 1:	Interventions and Ischemic Heart Diseases
Publishing Title:	THE IMPACT OF BIMA CABG ON THE EJECTION FRACTION IN INDIAN POPULATION - A LARGE RETROSPECTIVE DATA ANALYSIS FROM A SINGLE STUDY CENTRE
Author Block:	Sarju Ralhan, Dinakaran Umashankar, Eeshan Ralhan, Vikrampal Singh, Gurmeet singh, Samir Kapoor, Arun Garg, Rajat Sindwani, Rajesh Chand Arya, Dinesh Garg, Vivek Kumar Gupta, Suvir Grover, Harneet Singh Khurana, Gurpreet Singh Wander, Bishav Mohan, Naved Aslam, Shibba Takkar Chhabra, Abhishek Goyal, Rohit Tandon, Gautam Singal, Akash Batta, Anshuman Gupta, Hero DMC Heart Institute, Ludhiana, India
Abstract Body:	**Background:** CABG procedures provide improved cardiac function and offer survival benefits in patients with CAD. Large-scale real world outcomes of such procedures in the Indian context is lacking. Our study presents a large database of records from a single center on the outcomes of BIMA CABG procedure in the Indian population. **Methods:** The study included participants who underwent the BIMA CABG procedure with completeness of data of pre-operative (pre-op) and post-operative (post-op) ejection fraction. An improvement in outcomes was defined based on improvement in ejection fraction post-op. Chi-square test for proportion was tested for $P<0.05$. **Results:** The study included 1437 patients with a mean age of 59.4 ± 8.7 [Min - 28, Max - 82] years with a mean BMI of 26.5 ± 4.4 kg/m^2. About 59.8% had diabetes and 47.9% had hypertension. The median pre-op EF [IQR] was 45% [37,60]. After the BIMA CABG procedure, the median [IQR] EF increased to 55% [45,60]. Comparing the impact of BIMA, we observe a significant increase in the ($P<0.0001$) proportion of patients (by a factor of 2) with improved EF post-

op and the trend is indicated in Figure 1. In-hospital mortality occurred in three patients and about 12.9% (186/1437) had sternal pain.

Conclusion: To our knowledge, improvement in cardiac function post-CABG is demonstrated for the first time in India using large data from a single study centre. A significant proportion of patients have gained normal cardiac function postoperatively.



Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	19
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EPIDEMIOLOGY PROFILE OF HEART FAILURE PATIENTS WITH DIABETIC KIDNEY DISEASE INITIATING FINERENONE: INSIGHTS FROM REAL-WORLD DATA (FINARM STUDY)
Author Block:	Edison Omar Boada Lincango, Mario Galvan Ruiz, Maria del Val Groba Marco, Antonio Garcia Quintana, Miguel Fernandez de Sanmamed Girón, Francisco Amado Romano Matos, MIguel Casares Ruiz, Hospital Doctor Negrin, PALMAS DE GRAN CANARIA (LAS), Spain
Abstract Body:	**Background:** Heart failure (HF) and chronic kidney disease (CKD) often coexist, especially in patients with type 2 diabetes. Finerenone, a novel non-steroidal mineralocorticoid receptor antagonist, has shown promise in reducing kidney disease progression and cardiovascular events in clinical trials, though real-world data are limited. This study aims to evaluate the characteristics of patients with HF and diabetic kidney disease (DKD) initiating finerenone in a real-world setting. **Methods:** Prospective descriptive study (May-December 2024) including patients with DKD and HF. Clinical, laboratory, echocardiographic, and pharmacological data were analyzed. **Results:** 62 patients were included (mean age: 73.4 years; 27.4% female). Common comorbidities were hypertension (95.2%) and dyslipidemia (83.9%). HF etiologies included ischemic heart disease (58.1%), non-ischemic dilated cardiomyopathy (17.7%), and valvular disease (14.5%). NYHA classification showed 14.5% in class I, 71% in class II, and 14.5% in class III. In the past year, 33.9% were hospitalized for HF decompensation and 16.1% for worsening renal function. Median eGFR was 45 ml/min/1.73 m^2; urine albumin-to-creatinine ratio 98.3 mg/g (77% microalbuminuria, 23%

macroalbuminuria). Mean HbA1c was 7.5%. NT-proBNP and CA 125 medians were 1465 pg/mL and 15.8 U/mL, respectively. Echocardiographic findings showed 37.1% with reduced left ventricular ejection fraction (LVEF), 16.1% with mid-range LVEF, and 46.8% with preserved LVEF. All patients started finerenone (96.7% at 10 mg). Of these, 20.9% were MRA-naïve, and 79.1% switched from another MRA due to medical decision (51.4%), hyperkalemia (25.8%), or gynecomastia (1.9%). Concurrent medications included angiotensin receptor-neprilysin inhibitors (71%), beta-blockers (88.7%), and SGLT2 inhibitors (90.3%) and Diuretics (74.2%). Potassium binders were used by 29.1%.

Conclusion: This real-world cohort highlights the complex profile of patients with HF and DKD initiating finerenone, emphasizing their high comorbidity burden and intricate interaction between cardiac and renal dysfunction. Longer follow-up is needed to evaluate its impact

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	20
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	CHARACTERISTICS, COST/EFFECT CONSIDERATION OF CLINICAL EXAMINATIONS, AND CONSTRUCTION OF MACHINE LEARNING MODELS OF RESTRICTIVE CARDIOMYOPATHY: INSIGHTS FROM PEKING UNION MEDICAL COLLEGE HOSPITAL
Author Block:	An-Tian Chen, Wei Chen, Department of Cardiology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences, Beijing, China
Abstract Body:	**Background:** Restrictive cardiomyopathy (RCM) is uncommon and has heterogeneous causes. This study summarizes RCM characteristics, cost/effect analysis, and constructs machine learning (ML) models. **Methods:** The study included RCM patients with transthoracic echocardiography (TTE) and cardiac magnetic resonance imaging (MRI) records. Statistical analyses compared amyloidosis and non-amyloidosis groups. Cost/effect considerations were described for laboratory tests. Multivariate regression analyses included TTE and cardiac MRI features. Data analysis used SPSS and R, with feature selection via least absolute shrinkage and selection operator (LASSO) regression. Eight ML models were constructed employing leave-one-out cross-validation. The most effective model was evaluated for sample size and interpreted using Shapley additive explanations (SHAP). **Results:** The study included 83 records (55 amyloidosis, 28 other causes). The mean age was 54.8 years, with 60.24% male. Pathological examinations were conducted on 58 cases (69.9%). Significant differences were observed between groups. Testing autoimmune, infection, and tumor biomarkers cost RCM patients without corresponding causes more in total, though average cost was lower. Multivariate regression identified thickness of left ventricular

posterior wall (LVPW) and left ventricular ejection fraction (LVEF) from TTE, and left ventricular short axis (LVSA), LVEF, and interventricular septum (IVS) thickness from cardiac MRI indicated amyloidosis. LASSO regression selected five features for model construction. The Random Forest (RF) model performed best with 0.977 accuracy and a satisfying effect size. It also showed an excellent area under the curve (AUC), sensitivity, specificity, and Brier score.

Conclusion: Amyloidosis should be suspected in RCM patients with heart failure symptoms, restrictive TTE changes, and tongue hypertrophy. Routine testing for infection, autoimmune, and tumor is not advisable. TTE is recommended for all RCM patients, with cardiac MRI if feasible. Despite small sample size, an RF model for amyloidosis was successfully constructed, showing effect sizes over 0.5 and accuracy above 80%.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	21
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	IMPACT OF THE MORPHOLOGY OF THE LEFT VENTRICULAR THROMBUS ON THE CLINICAL OUTCOMES
Author Block:	Yaoyao Cai, Fuwai Hospital, National Center for Cardiovascular Diseases, Chinese Academy of Medical Sciences and, Beijing, China

Abstract Body:

Background: The impact of thrombus morphology on the outcome of patients with left ventricular (LV) thrombus is uncertain. We aimed to evaluate the risk of clinical outcomes between protuberant and mural thrombus and explore whether anticoagulation duration should be tailored to LV thrombus morphology.

Methods: We enrolled patients prospectively from 2020 to 2022 and retrospectively from 2010 to 2020 at the National Cardiovascular Center of China. Patients with a history of LV thrombus < 3 months were included. Inverse probability of treatment weighting (IPTW) Cox modeling was used to estimate associations between thrombus morphology and outcomes for the endpoints of thrombus resolution, the composite endpoint of major adverse cardiovascular events (MACE), and rehospitalization for cardiovascular events. Propensity score matching (PSM) and Cox multivariable models were adopted in additional sensitivity analyses.

Results: We included 623 patients, the majority of whom (84.9%) had mural thrombus. Congestive heart failure was diagnosed in 477 (76.6%) of the patients. Patients with protuberant thrombus had a longer duration of anticoagulation than those with mural thrombus (145d versus 87d, $P < 0.001$). In a median follow-up of 402d, patients with protuberant thrombus had a higher likelihood of LV thrombus resolution compared to those with mural thrombus with or without adjusting variables (unadjusted: HR 1.28, 95%CI

1.00-1.64, P = 0.046; IPTW: HR 1.34, 95%CI 1.00-1.78, P = 0.047; PSM: HR 2.12, 95%CI 1.05-4.29, P = 0.036; separately). No significant differences were found in MACE according to different LV thrombus morphology. Subgroups showed that in patients with protuberant thrombus, patients who also had ventricular aneurysms or regional wall motion abnormality experienced a higher rate of MACE than those who did not.

Conclusion: Compared to patients with mural thrombus, those with protuberant LV thrombus had a greater likelihood of thrombus resolution and a similar risk of MACE. The duration of anticoagulation varied depending on the morphology of the LV thrombus. Patients with protuberant thrombus had a longer duration of anticoagulation than those with mural thrombus.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	22
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	SIMPLIFIED PULMONARY ARTERY PULSATILITY INDEX AS A PREDICTOR OF MORTALITY AND REHOSPITALIZATION IN ACUTE HEART FAILURE WITH NON PRESERVED EJECTION FRACTION
Author Block:	Andika Sitepu, Andrew Timanta Brahmana, Cut Aryfa Andra, Andre Ketaren, Tengku Winda Ardini, Faisal Habib, Joy Wulansari Purba, Kamal Kharrazi Ilyas, nizam Zikri akbar, Amin Pugasdya Banggas Siagian, Department of Cardiology and Vascular Medicine Cardiac Center Adam Malik Hospital, Universitas Sumat, Medan, Indonesia
Abstract Body:	**Background:** Pulmonary artery pulsatility index (PAPi) is defined as equation of pulmonary artery pulse pressure to right atrial pressure (RAP) by invasive right heart catheterization (RHC) and act as predictor of right ventricular dysfunction caused by acute myocardial infarction or after left ventricular assist devices implantation for advanced heart failure patient. Simplified PAPi calculated by tricuspid regurgitation peak gradient (TRPG) to RAP ratio by transthoracic echocardiography (TTE) showed strong accuracy predicting invasive PAPi, and low simplified PAPi associated with 60-days mortality in acute decompensated heart failure-cardiogenic shock (ADHF-CS). We determined to find relationship between simplified PAPi and mortality or rehospitalization after discharge. **Methods:** From September 2023 to September 2024, all adult previously diagnosed with all phenotypes of acute heart failure (AHF) with ejection fraction (EF) <50%, by CS as SCAI shock stage ≥ C and exclusion of isolated RV failure, that had been discharged were queried and identified. Simplified PAPi was performed within 4 hours at first admitted in emergency department. Welch's T-test and ROC curves were made to assess simplified

PAPi accuracy in identifying mortality or rehospitalization 90-days follow-up.
Results: Total of 62 patients (60 ± 10 years, left ventricular EF 30 ± 9.9%) were included. 28 (45%) had ADHF, 19 (31%) had shock cardiogenic, and 15 (24%) had acute lung oedema. We found total 37 patients of combined of mortality and rehospitalization 90-days follow-up. A ROC analysis was calculated between simplified PAPi with mortality or rehospitalization 90-days follow-up with cutoff value 2.7 (area under curve = 0.75, sensitivity = 78%, specificity = 64%, 95% confidence interval [CI] : 0.62 - 0.88, p = 0.001).
Conclusion: This study concluded that a low simplified PAPi as a good predictor with combined endpoint mortality or rehospitalization at 90-days follow-up in AHF with non-preserved ejection fraction patients.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	23
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	BART'S SYNDROME IN AN ADULT PATIENT
Author Block:	Marina Muksinova, Yulia Osmolovskaya, Irina Leontieva, Mareta Galaeva, Alfiya Safiullina, Igor Zhirov, Sergey Tereshchenko, NATIONAL MEDICAL RESEARCH CENTRE OF CARDIOLOGY NAMED AFTER ACADEMICIAN E.I.CHAZOV, Moscow, Russian Federation, u.E. Veltischev Research and Clinical Institute for Pediatrics and Pediatric Surgery, Moscow, Russian Federation
Abstract Body:	**Background:** Present a clinical case of an adult patient with Barth syndrome with peculiarities of the course and treatment of the disease. **Case:** 33-year-old patient admitted in January 2023 with dyspnea and attacks of palpitations at minimal physical activity, rapid fatigue. From birth he was worried about delayed static-motor and speech development. The patient was examined at 3 years of age. According to echocardiography(ECHO): heart cavities are not dilated, contractility is not changed, ejection fraction (EF) 66%, symmetric non-obstructive hypertrophic cardiomyopathy is revealed (interventricular septum 12 mm, posterior wall of the left ventricle(LV) 13 mm). Reduced energetic myocardial metabolism was detected by positron emission tomography with radiopharmaceutical. General blood test showed neutropenia. Examination of urine acid composition revealed high excretion of 3-methylglutaconic acid. Based on the results of examinations, Bart's syndrome was suspected. By the age of 16 on metabolic therapy, all ECHO and physical development parameters were normal. The patient has been deteriorating since the summer of 2022, when the above complaints appeared. According to ECHO data: heart cavity and wall thickness were

normal, EF ≈ 45%. Bart's syndrome was genetically confirmed. On the background of treatment in hospital, there were clinical improvement and increase EF up to 52%.

Decision-making: Due to symptomatic hypotension, the patient was prescribed candesartan 4 mg/day, bisoprolol 5 mg/day and spironolactone 25 mg/day. Due to clinical positive effect of previously conducted metabolic therapy. Against the background of attempts to prescribe dapagliflozin, the patient had symptomatic hypoglycemia (up to 3.0 mmol/l during the day), therefore it was cancelled. In our opinion, this result of decreased reabsorption of glucose from the tubular filtrate under conditions of increased reliance on anaerobic glucose metabolism to meet energy needs.

Conclusion: This case demonstrates specialties and difficulties in selecting the optimal treatment of a patient with Barth syndrome in real clinical practice, in the absence of clearly prescribed recommendations and pathogenetic therapy.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	24
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	PROGNOSTIC VALUE OF SST2 AND NT-PROBNP IN PATIENTS AFTER ACUTE DECOMPENSATION OF HEART FAILURE WITH REDUCED EJECTION FRACTION.
Author Block:	Marina Muksinova, Oleg Narusov, Tatiana Sharf, Valeriy Masenko, Sergey Tereshchenko, Andrey Skvortsov, NATIONAL MEDICAL RESEARCH CENTRE OF CARDIOLOGY NAMED AFTER ACADEMICIAN E.I.CHAZOV, Moscow, Russian Federation
Abstract Body:	**Background:** Assess the risk of cardiovascular events (CVE) in patients with heart failure and reduced ejection fraction (HFrEF) depending on sST2 and NT-proBNP concentrations at hospital discharge and their changes during outpatient follow-up and treatment during the year after the episode of acute decompensation of heart disease (ADHF). **Methods:** Prospective study included 132 patients, which were hospitalized for decompensated heart failure (HF) due to ischemic heart disease, dilated cardiomyopathy and atrial hypertension, with reduced ejection fraction (EF<40%). The mean age was 59 ±10.7 years, 118 (89.4%) of them were men. SST2 and NT-proBNP concentrations were determined initially and at discharge after 6 and 12 months. The period of period of follow-up was 1 year. The number of CVE, which included episodes of decompensation/hospitalization HF and cardiovascular death. **Results:** Threshold concentrations of sST2 and NT-proBNP at discharge, below which the risk of CVE during the year after discharge were 29.3 ng/mL (area under the ROC curve : 0.631 ± 0.050 with 95% CI: 0.534 to 0.728, p = 0.010) and 2647 pg/mL (area under the ROC curve 0.615 ± 0.050 with 95% CI: 0.518 - 0.713, p = 0.024), respectively. Decreases in sST2 concentration ≤ 23.4

ng/mL (area under the ROC curve 0.746 ± 0.051 with 95% CI: 0.647 - 0.846, p<0.001) or by ≥34.3(20.8; 48.2) %, and NT-proBNP ≤1132 pg/mL (area under the ROC curve was 0.757 ± 0.049 with 95% CI: 0.660 to 0.853, p <0.001) or by ≥38.9% during 6 months of outpatient treatment, were associated with a lower risk of CVE. In the absence of simultaneous reductions in both biomarkers, a high risk of CVD persisted: OR=6.583; 95% CI 3.448- 12,569, p <0,001.

Conclusion: A simultaneous reduction in sST2 ≤ 23.4 ng/mL or by ≥34.3% and NT-proBNP ≤ 1132 pg/mL and by ≥38.9% must be achieved to reduce the risk of CVE.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	25
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	A CASE OF EDMD PATIENT WITH PRESERVED CARDIAC FUNCTION
Author Block:	Zhuang Xinyu, Fudan University Affiliate Huashan Hospital, Shanghai, China

Abstract Body:

Background: Emery-Dreifuss muscular dystrophy (EDMD) is an uncommon, inherited human disease, with three patterns of inheritance. EDMD is clinically characterized by muscle atrophy and weakness, multi-joint contractures with spine rigidity, and cardiomyopathy.The potentially fatal cardiac complications and the high risk of sudden death necessitates regular cardiac evaluation, so early diagnosis and intervention are particularly significant for EDMD patients.

Case: The patient was a 65-year-old male, admitted to the cardiology department for 'anhelation and weakness for more than ten years, worsening with edema in both lower limbs for one month'. The patient presented wasting in the upper arm, Achilles contracture, and limitation of neck flexor because of neck contractures. Muscle strength examination was 4/5 on the upper and 4/5 on the lower limbs, with no cervical weakness. Swaying movements were present on walking.Serum creatine kinase (CK) level was within normal range. Electrocardiogram and Holter monitoring revealed atrial tachycardia, paroxysmal atrial fibrillation, third degree atrioventricular block. Meanwhile, echocardiogram showed an enlarged heart with left ventricular ejection fraction was 58%. Both atria were significantly enlarged with severe mitral and tricuspid regurgitation. Estimated pulmonary artery systolic pressure is 103mmHg,indicating pulmonary hypertension.

Decision-making: A family containing the proband patients spanning three

generations was studied. Two family members were diagnosed with EDMD (heterozygous variant involving a C to T transition in exon 3 of the EMD gene).The proband patient's was implanted with a permanent pacemaker. Vasodilation and diuretics were given to improve heart failure ursodeoxycholic acid and glutathione were prescribed to protect his liver function. He was followed up every six months.

Conclusion: We were the first to identify a novel EMD nonsense mutation (c.256C>T, p.Q86X) in a family associated with EDMD1. We observed that the proband patient manifested with heart enlargement, moderate pulmonary hypertension accompanied with arrhythmia while maintained his cardiac systolic function.

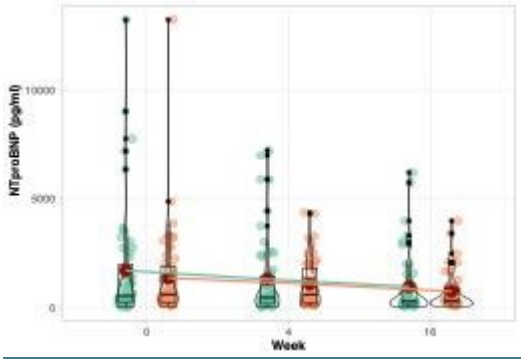
Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	26
Topic 1:	Cardiac Arrhythmias
Publishing Title:	PET-CT FINDINGS IN PATIENTS REFERRED FOR VENTRICULAR ARRHYTHMIAS DUE TO CHAGAS DISEASE
Author Block:	Aneeq Malik, Kevin Kurator, Devon Terraciano, Radhika Gulhar, Michael Jiang, Jason S. Bradfield, Sheba K. Meymandi, Justin Hayase, Olive View-UCLA, Los Angeles, CA, USA, UCLA Health Cardiac Arrhythmia Center, Los Angeles, CA, USA
Abstract Body:	**Background:** Chagas disease (CD) is a parasitic infection that can lead to cardiomyopathy (CMY), ventricular arrhythmias (VA), and sudden death. Chronic inflammation of the myocardium is noted to play a key role in disease progression and VA development. Positron Emission Tomography-Computed Tomography (PET-CT) identifies myocardial inflammation, but data on its use in CD are limited. **Methods:** We retrospectively reviewed CD patients at two large hospitals in California who presented with VA and underwent PET-CT imaging. Patients fasted for at least 16 hours to induce myocardial free fatty acid metabolism prior to imaging. **Results:** Six patients with CD and ongoing VA between 2013-2021 who underwent PET-CT were identified for analysis. The patients were comprised of 4 (67%) males and 2 (33%) females with mean age of 54.3 ± 9.1 years and ejection fraction of 28.3% ± 14.6%. None had received prior anti-trypanosomal treatment of their CD. Among the six patients, 3 (50%) presented in VT storm while 3 (50%) presented in the outpatient setting with recurrent ICD therapies. Of the six PET-CT scans, 5 (83.3%) had abnormal FDG uptake while 1 (17.7%) had no abnormal FDG uptake. Of the 5 patients with abnormal FDG uptake, 3 (60%) underwent successful

epicardial/endocardial ablation, 1 (20%) had resolution of VT following anti-trypanosomal treatment, and 1 (20%) had an incomplete ablation that was complicated by right ventricle perforation. Of the three patients who had successful VT ablation, one had recurrent slow VT that resolved following a stellate gangliectomy, one underwent orthotic heart transplantation for worsening CMY, and the other had a recurrent VT episode after 19 months that resolved with sotalol loading. The patient with no abnormal uptake on PET-CT expired due to non-cardiac causes within two months of presentation. **Conclusion:** Abnormalities in PET-CT imaging are common (83%) in patients with CD and ongoing VA. Ablation outcomes are comparable to existing reports. Whether PET-CT abnormalities can inform decision-making regarding treatment strategies requires further study.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	27
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EFFECTS ON NTPROBNP OF DAPAGLIFLOZIN VERSUS SACUBITRIL/VALSARTAN THERAPY IN HEART FAILURE WITH REDUCED EJECTION FRACTION - A PRAGMATIC RANDOMISED CONTROLLED TRIAL
Author Block:	Krishna Tiwari, Muhammad Aaqib Shamim, Surender Deora, Rahul Choudhary, Atul Kaushik, Shrimanjunath Sankanagoudar, PRADEEP DWIVEDI, Surjit Singh, Sneha Ambwani, Naresh Kumar Midha, Vikas Kumar Tiwari, Mohit Dadhich, Isha Yadav, Rakesh Dodiya, Shoban Babu Varthya, AIIMS JODHPUR, JODHPUR, India
Abstract Body:	**Background:** Treatment for Heart failure has evolved significantly. Angiotensin Receptor-Neprilysin Inhibitors (ARNI) and Sodium-Glucose Cotransporter-2 inhibitors (SGLT2i) are now the cornerstone for heart failure with reduced ejection fraction (HFrEF). With no head-to-head randomized controlled trials (RCTs) between ARNI and SGLT2 inhibitors, evidence guiding the selection of one therapy over the other among these first line therapies in HFrEF remains inconclusive. **Methods:** In this pragmatic RCT, patients with HFrEF (left ventricular ejection fraction ≤ 40%) belonging to New York Heart Association (NYHA) II-III received either dapagliflozin or sacubitril/valsartan. Endpoints are change in N-terminal pro-B-type natriuretic peptide (NT-proBNP) serum levels from baseline to 16 weeks. **Results:** Patients with HFrEF where 52 receiving dapagliflozin group and 53 receiving sacubitril/valsartan. NT-proBNP decreased with both dapagliflozin and sacubitril/valsartan over 16 weeks [least-squares mean (95% CI) of 641.13 pg/ml (335.53 to 946.74) and 799.94 pg/ml (490.95 to 1108.93)] respectively]. But, there is no difference between the groups after adjusting

for baseline [-158.81 pg/ml (-593.66 to 276.05), p=0.47].

Conclusion: There is improvement in NT-proBNP serum biomarker with both dapagliflozin and sacubitril/valsartan in HFrEF, but this study did not detect any difference between both first line drugs.



Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	28
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	ACUTE MYOCARDITIS IN A PATIENT WITH DUCHENNE MUSCULAR DYSTROPHY - CASE REPORT
Author Block:	Lan Huong Thi Le, Vinh Nguyen Pham, Tam Anh Ho Chi Minh General Hospital, Ho Chi Minh, Viet Nam

Abstract Body:

Background: Duchenne muscular dystrophy (DMD) is a rare X-linked neuromuscular disorder affecting approximately 1 in 3,600 to 6,000 live male births. It is characterized by muscle degeneration, necrosis, inflammation, and fibrous tissue deposition, leading to progressive skeletal and cardiac muscle disease, with cardiomyopathy being a major cause of morbidity and mortality. Hence, we present a clinical case of myocarditis in a Duchenne patient.

Case: A 9-year-old boy was diagnosed with Duchenne muscular dystrophy at the age of 1. Currently, he is being treated with Vamorolone at a dose of 5 ml/day. One week ago, he complained of chest pain during walking, without shortness of breath. The pain occurred in episodes lasting a few minutes, worsened with exertion. The patient denied any fever or respiratory symtoms. Vital signs were normal. Physical examination revealed muscle strength of 4/5 in both arms and legs, scoliosis, and no abnormalities in other organ systems. Laboratory tests showed elevated CK levels (11,654.41 U/L) and increased Troponin I-hs (578 ng/L). ECG showed mild ST elevations and an abnormal Q wave in III and aVF. Echocardiography showed no abnormalities. CMR findings were consistent with acute myocarditis. Late gadolinium enhancement demonstrated diffuse distribution involving the basal interventricular septum, the entire lateral wall, and the inferior wall, with fibrotic tissue constituting 31.6% of the total left ventricular myocardial mass.

Genetic testing confirmed a mutation in the DMD gene (c.5765_5771delAGAAAGA p.(Lys1922fs)

Decision-making: Among the few reported cases of acute myocarditis in a patient with DMD, most patients were hospitalized due to chest pain. Our case emphasizes that, in children with DMD, even mild symptoms deserve clinical attention. In patients with normal cardiac function, markers of myocardial injury and ECG abnormalities may provide valuable information. Further evaluation with CMR is essential to confirm a diagnosis of myocarditis.

Conclusion: This case emphasizes the imperative for rigorous monitoring and a multidisciplinary approach to effectively manage cardiac complications in DMD, thereby improving patient outcomes.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	29
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	SOCIODEMOGRAPHIC AND CLINICAL FACTORS ASSOCIATED WITH POST-DISCHARGE LOSS TO FOLLOW-UP AMONG PATIENTS WITH HEART FAILURE WITH REDUCED EJECTION FRACTION AT A TERTIARY HOSPITAL IN THE PHILIPPINES
Author Block:	TIFFANY PEARL GUEVARRA, KEVIN ENRIQUEZ, LAUREN KAY EVANGELISTA, FRANCES DOMINIQUE HO, POCHOLO MAGLINTE, NIGEL JERONIMO SANTOS, SHERRY MAE MONDIDO, DIANA TAMONDONG-LACHICA, Felix Eduardo Rubia Punzalan, ROSA SILVANA BASCUÑA, University of The Philippines - Philippine General Hospital, MANILA CITY, Philippines
Abstract Body:	**Background:** Early post-discharge follow-up and rapid up-titration of medication is recommended in patients with heart failure with reduced ejection fraction (HFrEF). Despite this, studies reveal follow-up rates to be unsatisfactory and associated with sociodemographic and clinical factors. The study aimed to identify factors associated with loss to follow-up within 3 months post-discharge among patients HFrEF at the University of the Philippines - Philippine General Hospital. **Methods:** We included patients with HFrEF referred to the division of cardiovascular medicine within 1 year. Reviewing their electronic records, we identified patients who failed to follow up within 3 months post-discharge. Clinical and sociodemographic characteristics were compared using the T-test and Chi-square analysis. Crude odds ratios for potential factors affecting loss to follow-up were determined by logistic regression analysis **Results:** A total of 348 patients were analyzed**.** Follow up rate was 53.7%. Patients who failed to follow- up were typically older (CI 0.966-0.997) and female (CI 0.346-0.845). The distance traveled to the hospital, background

education, and household income did not determine the likelihood of follow-up. The presence of CKD (CI 0.317-0.753), among whom a large proportion (37.3%) were on maintenance dialysis, was significantly associated with loss of follow-up. Chronic obstructive pulmonary disease (CI 0.056-0.731), the presence of home oxygen support on discharge (CI 0.036-0.802), and an increasing number of co-managing subspecialties (0.696-0.902) were associated with a higher likelihood of loss to follow-up. On the other hand, a higher number of discharge medications was associated with a higher likelihood of follow-up (CI 1.015-1.147).

Conclusion: Poor follow-up among patients with HFrEF is affected by sociodemographic and clinical factors. Creating strategies to improve follow-up among patients with these factors and generating further studies exploring patient perspectives and organizational systems is crucial. We recommend the development of protocols that employ well-coordinated multispecialty follow-up.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	30
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EFFECTS ON GROWTH DIFFERENTIATION FACTOR -15 OF DAPAGLIFLOZIN VERSUS SACUBITRIL-VALSARTAN THERAPY IN HEART FAILURE WITH REDUCED EJECTION FRACTION -A PRAGMATIC RANDOMISED CONTROLLED TRIAL
Author Block:	Krishna Tiwari, Muhammad Aaqib Shamim, Surender Deora, Rahul Choudhary, Shrimanjunath Sankanagoudar, PRADEEP DWIVEDI, Surjit Singh, Sneha Ambwani, Naresh Kumar Midha, Ravindra Shukla, Mohit Dadhich, Shoban Babu Varthya, AIIMS JODHPUR, JODHPUR, India
Abstract Body:	**Background:** Treatment for Heart failure has evolved significantly. Angiotensin Receptor-Neprilysin Inhibitors (ARNI) and Sodium-Glucose Cotransporter-2 inhibitors (SGLT2i) are now the cornerstone for heart failure with reduced ejection fraction (HFrEF). With no head-to-head randomized controlled trials (RCTs) between ARNI and SGLT2 inhibitors, evidence guiding the selection of one therapy over the other among these first line therapies in HFrEF remains uncertain. **Methods:** In this pragmatic RCT, patients with HFrEF (left ventricular ejection fraction ≤ 40%) belonging to New York Heart Association (NYHA) II-III received either dapagliflozin or sacubitril/valsartan. Endpoints are change in N-terminal pro-B-type natriuretic peptide (NT-proBNP) and Growth differentiation factor (GDF-15) serum levels from baseline to 16 weeks. **Results:** 105 patients underwent randomization with 52 receiving dapagliflozin group and 53 receiving sacubitril/valsartan. Serum GDF-15 decreased with both dapagliflozin and sacubitril/valsartan over 16 weeks with 1321.79 ng/ml (1183.03 to 1460.54) and 1392.23 ng/ml (1251.93 to 1532.53)] respectively, after being adjusted for baseline, though there is no difference

between both the groups [-70.44 mg/ml (-268.42 to 127.53), p=0.48]
Conclusion: There is improvement in serum biomarkers with both dapagliflozin and sacubitril/valsartan in HFrEF, but this study did not detect any difference between both first line drugs.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	31
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	METFORMIN ASSOCIATED LOWER RISK OF DEMENTIA AMONG HEART FAILURE PATIENTS A POPULATION-BASED RETROSPECTIVE COHORT STUDY
Author Block:	Ami Matsumoto, Qing-Wen Ren, Tze Wei Tsang, Yi-Kei Tse, Ran Guo, Jingnan Zhang, Kai-Hang Yiu, The University of Hong Kong, Hong Kong, China
Abstract Body:	**Background:** Metformin has been associated with conflicting results regarding its effect on dementia onset. Observational studies raised mixed evidence and hypothetic underlying mechanisms for long-term metformin therapy and dementia risk. Therefore, this study aims to investigate the association of metformin use with the risk of dementia incidence and its sub-types among patients with heart failure (HF). **Methods:** Data were collected from the Clinical Data Analysis and Reporting System (CDARS), a validated territory-wide clinical data registry managed by the Hong Kong Hospital Authority. Metformin use was ascertained among all eligible patients with HF (N=104295) from 2000 to 2023 and was defined as more than 90 consecutive days of metformin use after HF diagnosis. Propensity score matching was used to balance baseline covariates between metformin nonusers (N=78763) with metformin users (N=25532). Competing risk regression was conducted with Cox proportional-hazard models to estimate the risk of incident dementia associated with metformin use. **Results:** Of all eligible subjects, the mean age was 74±13 years, and 52511 (50.3%) were male. Over a median follow-up of 5.5 years (interquartile range [IQR]: 2.2 to 8.8), 22,145 (11.0%) patients were diagnosed with dementia, including Alzheimer's disease (N=5936), vascular dementia (N=4008), and unspecified dementia (N=12201). After propensity score matching, metformin use was associated with a 31% lower risk of dementia incidence

(multivariable-adjusted sub-distribution hazard ratio [SHR]=0.69; 95% Confidence Interval [CI], 0.68 to 0.71) after accounting for non-dementia mortality as a competing risk. Furthermore, metformin use was significantly associated with a 27% lower risk of Alzheimer's disease (SHR=0.73, 95%CI, 0.71-0.74), 28% lower risk of vascular dementia (SHR=0.72, 95%CI, 0.70-0.74), 29% lower risk of unspecified dementia (SHR=0.71, 95%CI, 0.69-0.72) after accounting for competing risk.

Conclusion: Our study suggests dementia incidence was common in the HF population. Moreover, Metformin use was associated with a substantially reduced risk of incident dementia and its sub-types in HF patients.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	33
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	DISPARITIES AFTER RECEIVING ORTHOTOPIC HEART TRANSPLANTATION: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Somkiat Phutinart, Noppachai Siranart, Patavee Pajareya, Akaravit Thamthanaruk, Vanit Nokkhuntong, Witina Techasatian, Ponthakorn Kaewkanha, Center of Excellence in Arrhythmia Research, Chulalongkorn University, Bangkok, Thailand, Department of Preventive and social medicine, Chulalongkorn University, Bangkok, Thailand
Abstract Body:	**Background:** Orthotopic heart transplantation (OHT) is a critical intervention for end-stage heart failure. Disparities in post-transplant care may impact patient outcomes. **Methods:** A literature search was conducted from inception to July 2024, focusing on studies that reported disparities and outcomes after OHT. The primary endpoint was post-transplant complications including pacemaker implantation, stroke, and hemodialysis. Secondary endpoints were post-transplant mortality, post-transplant complications, and length of stay (LOS). **Results:** A total of 13 studies were included involving 280,257 patients who underwent OHT. White patients and those from non-distressed SES were more likely to receive pacemaker implantation after OHT (OR1.31; 95%CI1.23-1.38, I^2=0% and OR1.08; 95%CI1.01-1.14, I^2=0%). and experienced higher rates of graft rejection (OR1.21; 95%CI1.11-1.32, I^2=0% and OR1.17; 95%CI1.07-1.27, I^2=0%), as well as significantly longer LOS post-transplant (MD3.09days; 95%CI0.61-5.57, I^2=99.8% and MD2.72days; 95%CI2.52-2.93, I^2=97.9%) Black patients also had a higher 10-year mortality rate (OR1.42; 95%CI1.27-1.58, I^2=0%), while those from distressed SES had increased rates of dialysis(OR1.04; 95%CI1.03-1.05, I^2=0%). No disparities were seen in post-

transplant stroke.

Conclusion: Racial and socioeconomic disparities exist in outcomes following OHT, underscoring the need for targeted interventions to promote equity of care.

Table 1. Disparities in Outcomes After Orthotopic Heart Transplantation

(A) Post-transplant complications

		OR - Univariable Analysis			
Complications	**Disparities**	**k**	**I²**	**TE (95%CI)**	**p-value**
Pacemaker	White*	3	0%	1.31 (1.23-1.38)	**0.003**
	High SES	4	0%	1.08 (1.01-1.14)	**0.032**
Stroke	White*	5	0%	1.04 (0.91-1.19)	0.470
	Female	2	0%	1.18 (0.80-1.75)	0.116
	Low SES	4	0%	0.91 (0.82-1.02)	0.073
Dialysis	Black†	3	93.3%	1.30 (0.61-2.79)	0.276
	Low SES	4	0%	1.04 (1.03-1.05)	**0.001**

(B) Graft rejection

	OR - Univariable Analysis			
Disparities	**k**	**I²**	**TE (95%CI)**	**p-value**
Black race†	2	0%	1.21 (1.11-1.32)	**0.023**
Low SES	4	0%	1.17 (1.07-1.27)	**0.010**

(C) Post-transplant mortality

		OR - Univariable Analysis			
Mortality	**Disparities**	**k**	**I²**	**TE (95%CI)**	**p-value**
All-cause	Black race†	2	0%	1.02 (0.66-1.56)	0.734
10-year	Black race‡	2	0%	1.42 (1.27-1.58)	**0.016**
5-year	Black race†	2	0%	1.10 (0.89-1.37)	0.108
	Low SES	4	95.8%	1.01 (0.68-1.51)	0.933
3-year	Low SES	4	87.2%	1.05 (0.81-1.37)	0.608

(D) LOS

	MD			
Disparities†	**k**	**I²**	**TE (95%CI)**	**p-value**
Black race†	3	99.8%	3.09 days (0.61-5.57)	**<0.001**
Low SES	2	97.9%	2.72 days (2.52-2.93)	**<0.001**

SES, socioeconomic status; LOS, length of hospital stay; OR, odd ratio; HR, hazard ratio; MD, mean difference; TE, effect size; CI, confidence interval; k, number of studies included in each analysis; *compared to non-white; †compared to non-black; ‡compared to white.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	34
Topic 1:	Heart Failure and Cardiomyopathies
Publishing Title:	EFFICACY AND SAFETY OF SODIUM GLUCOSE COTRANSPORTER-2 INHIBITOR IN PEDIATRIC HEART FAILURE: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Christianto Christianto, Sisca Siagian, Faculty of Medicine Universitas Indonesia, Jakarta, Indonesia, National Cardiovascular Center Harapan Kita, Jakarta, Indonesia
Abstract Body:	**Background:** Sodium-glucose cotransporter type 2 inhibitor (SGLT2i) is an essential part in the guideline-directed medical therapy for adult heart failure (HF). While it is effective, well-tolerated, and has few side effects in adults, little is known on its use in pediatric HF which is associated with significant morbidity and mortality. Therefore, this systematic review and meta-analysis aims to assess the efficacy and safety of SGLT2i for pediatric HF. **Methods:** This meta-analysis was conducted according to the Preferred Reporting Items for Systematic Review and Meta-Analysis statement, where 5 electronic databases were searched from date of inception to December 2024. The continuous outcomes were compared using mean difference, while dichotomous outcomes were compared using risk ratio with 95% confidence interval (CI). Quality assessment of the included studies was assessed using the Consolidated Standards of Reporting Trials (CONSORT) 2010 statement. **Results:** Four studies with a total of 122 pediatric patients met the inclusion criteria and were included in this meta-analysis. SGLT2i significantly reduced Brain Natriuretic Peptide (BNP) with mean difference -103.54; I^2 = 0%; Z = 2.00 (P=0.05); 95%CI -205.10 - -1.98. SGLT2i also improved ejection fraction [Mean difference 6.99; I^2 = 0%; Z = 1.08 (P=0.28); 95%CI -5.61 - 19.36], reduced

NTproBNP [Mean difference -673.08; I^2 = 0%; Z = 1.56 (P=0.12); 95%CI -1517.82 - 171.66], and improved New York Heart Association Functional Classification [Risk Ratio 1.15; I^2 = 18%; Z = 0.96 (P=0.33); 95%CI 0.87 - 1.52], even though not significant. The adverse events were mostly minor and reversible such diuresis, urinary tract infection, and reversible acute kidney injury. SGLT2i significantly reduced eGFR with mean difference -24.57; I^2 = 0%; Z = 2.19 (P=0.03); 95%CI -46.52 - -2.62, but these side effects were mostly reversible.

Conclusion: SGLT2i is generally well-tolerated without any unexpected adverse events and has potential benefits as management for pediatric HF. Further studies with larger samples are required to establish the benefits of SGLT2i as well as its safety profile in pediatric HF.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	35
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CEREBRAL HAEMODYNAMICS AND HEART RATE DURING ORTHOSTATIC CHALLENGE WITH AND WITHOUT LIMB MUSCLE CONTRACTION
Author Block:	Mutia Lailani, Alun Hughes, Siana Jones, Sarah Mason, University College London, London, United Kingdom, Universitas Andalas, Padang, Indonesia

Abstract Body:

Background: Standing up can decrease blood pressure and cerebral blood flow, potentially affecting balance in older adults. In contrast, younger individuals may be less impacted, likely due to the "muscle pump." However, its effects on cerebral blood flow remain unclear. This study evaluated cerebral haemodynamic changes using functional near-infrared spectroscopy (fNIRS) during head-up tilt (HUT) in healthy young participants, both with and without lower limb muscle contractions, while monitoring heart rate changes to assess overall haemodynamics.

Methods: We conducted this experimental study with healthy young participants without prior cardiovascular disease or comorbidities. Cerebral haemodynamic changes, specifically total haemoglobin (Hb) concentration changes (Δ[tHb]) in the prefrontal cortex, were measured using fNIRS. Data were processed with custom MATLAB® R2018a software, and statistical analyses were performed using STATA (Version 15.1). Heart rate changes (ΔHR) were continuously monitored with a Finometer.

Results: Nine participants (7 females and 2 males, aged 26 ± 3.77 years) completed the study, with none exhibiting symptoms of orthostatic intolerance. The challenge without muscle contraction did not convincingly associate with Δ[tHb] (mean ± SD: 2.17E-04 ± 2.69E-04 au; p = 0.1). The findings showed that there was no significant difference in Δ[tHb] was found between HUT with and without muscle contraction (mean ± SD: -3.6E-04 ±

5.1E-04 au vs. 2.17E-04 ± 2.69E-04 au, p = 0.46). Furthermore, ΔHR was significantly higher during HUT with muscle contraction compared to without (mean ± SD: 21.99 ± 6.30 bpm vs. 15.49 ± 6.17 bpm, p < 0.03).
Conclusion: We found no evidence of a change in cerebral haemodynamics during head-up tilt. Nevertheless, lower limb muscle contraction increased the heart rate change in healthy subjects undergoing the orthostatic challenge.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	36
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	BACK TO THE HEART- A CASE REPORT OF SACROILIITIS IN INFECTIVE ENDOCARDITIS
Author Block:	Catherine Paul, Amala institute of medical sciences, thrissur, Kerala, India
Abstract Body:	**Background:** Abiotrophia defectiva (A. defectiva) is a rare species leading to infective endocarditis (IE) with a poor prognosis. We describe a previously healthy patient with complaints of lower back pain and evening rise of temperature to have mitral valve infective endocarditis caused by A. defectiva. **Case:** A middle-aged man presented with complaint of lower back pain and evening rise of temp for 6 weeks. On admission, the patient was febrile and had a pulse rate of 100 beats per minute which was regular in rhythm and a blood pressure of 130/80 mm Hg. On systemic examination, no cardiac murmurs were auscultated and no other findings suggestive of IE were found. **Decision-making:** Biological investigations revealed an inflammatory syndrome with elevated sedimentation rate and C reactive protein. The conventional radiographs of the chest, sacroiliac joint, vertebral column, and hip joint did not find any anomaly. The analysis of pelvic MRI detected left sacroiliitis. Immunological workup done showed ANA profile is negative.Bone marrow culture showed Streptococcus Abiotrophia defectiva species. Three sets of blood culture send, and his blood culture became positive for Gram-positive cocci, which was identified as Abiotrophia defectiva.Echocardiography done showed posterior mitral valve leaflet prolapse and a 10 mm by 11 mm dangling structure, suggestive of vegetation. Features were suggestive of IE and thus patient was started on injection

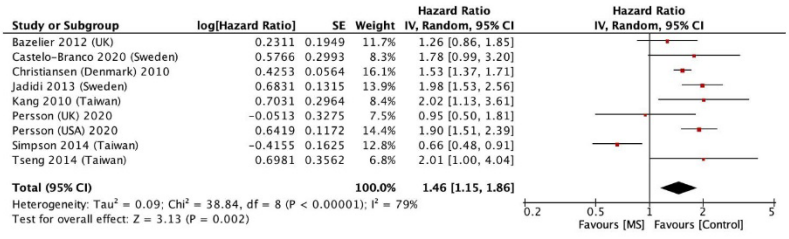
ceftriaxone (2 gm, intravenous, twice a day) for four weeks and injection gentamicin (80 mg, intravenous, twice a daily) for two weeks. Following antibiotic initiation patient's fever has settled and back pain intensity has reduced.

Conclusion: Infective endocarditis caused by nutritionally variant streptococci (NVS) has posed tremendous diagnostic and therapeutic challenges and continue to do so even in the era of modern medicine. Treatment failure and high complication rates associated with Abiotrophia endocarditis is at least partially attributable to the pleomorphic nature of the organisms, lack of growth in subcultures and specific nutritional requirements in media.

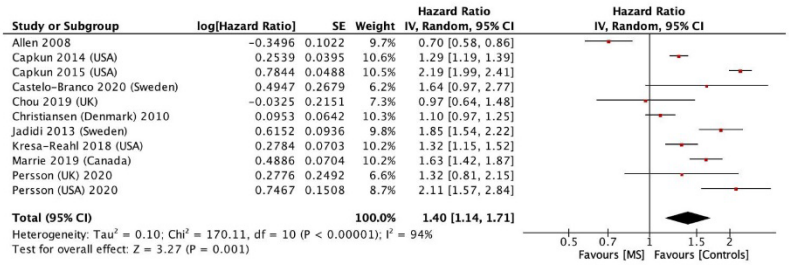
Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	37
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	MULTIPLE SCLEROSIS IS ASSOCIATED WITH HIGHER RISK OF HEART FAILURE AND MYOCARDIAL INFARCTION: A SYSTEMATIC REVIEW AND META-ANALYSIS
Author Block:	Hritvik Jain, Dhruvi Joshi, Nandan Patel, Jagjot Singh, Ramez M. Odat, Jyoti Jain, Raheel Ahmed, Surender Deora, All India Institute of Medical Sciences, Jodhpur, Jodhpur, India, Narendra Modi Medical College and Sheth L.G. Hospital, Ahmedabad, Ahmedabad, India
Abstract Body:	**Background:** Associations between various autoimmune diseases (e.g. sarcoidosis) and an increased incidence of cardiovascular diseases (CVDs) are well established. However, the current literature demonstrating the association between multiple sclerosis (MS) with CVDs is limited. **Methods:** A systematic search of the major databases was performed to identify relevant studies. Effect estimates were calculated by pooling hazard ratios (HR) and 95% CIs employing the inverse-variance random effects model. Statistical significance was set at $p<0.05$. **Results:** 15 studies with 210,301 patients diagnosed with MS were included. On pooled analysis, MS was associated with an elevated risk of heart failure (HF) [HR: 1.46; 95% CI: 1.15, 1.86; p = 0.002] and myocardial infarction (MI) [HR: 1.40; 95% CI: 1.14, 1.71; p = 0.001]. **Conclusion:** This meta-analysis concludes that MS is associated with an increased risk of HF and MI. Larger prospective studies are needed to

delineate risks for other CVDs in patients with MS.

A. Heart failure:



B. Myocardial infarction:



Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	38
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CLINICAL FEATURES OF CARDIAC CALCIFIED AMORPHOUS TUMOR
Author Block:	Yu Takahashi, Yusuke Inaba, Minegishi Sachito, Hidehito Endou, Hiroshi Kubota, Kyorin university, Tokyo, Japan

Abstract Body:

Background: Cardiac calcified amorphous tumor (CAT) is a non-neoplastic cardiac mass characterized by calcified nodules within amorphous fibrous tissue, degeneration, and chronic inflammation. Although reports of CAT have increased, its clinical manifestations remain unclear.

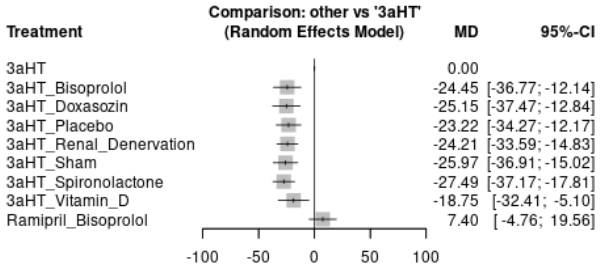
Methods: A comprehensive PubMed search using the keyword “Cardiac Calcified Amorphous Tumor” was conducted to elucidate its epidemiology and clinical characteristics, focusing on uncovering new insights into CAT and preventing embolic complications. A total of 123 articles published between Jan.1.1997 and Jan.1.2024 were retrieved. Clinical features, including patient backgrounds, differences with and without end-stage renal disease (ESRD), symptom-related factors, embolism risk, CAT characteristics (shape, location, mobility, pathology, treatment), were statistically analyzed in 136 criteria-matched cases.

Results: The mean patient age was 58.5±18.1 years, with 57 men. Data from 24 countries included 60 Japanese patients. Symptomatic cases were found in 106 patients, mostly caused by heart failure or embolism. Embolism occurred in 44 cases, including cerebral infarction, pulmonary embolism, and myocardial infarction. Asymptomatic cases numbered 30, 23 of which were Japanese. Among asymptomatic Japanese, 17 of 23 had ESRD. In the ESRD group, Japanese patients and CATs from the mitral valve region, mobile CAT, and linear, club-shaped, or spindle-shaped CAT were more common.

Conclusion: The mechanism of CAT development, including shape, mobility, and localization, may differ based on ESRD status. CATs in ESRD patients and those originating from the mitral valve are highly mobile and pose a high embolism risk. The large number of asymptomatic Japanese cases likely results from routine transthoracic echocardiography for ESRD patients, enabling diagnosis before symptoms occur. Early diagnosis through regular exams and aggressive surgical treatment in ESRD patients is essential to prevent critical embolism.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	39
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	CAN WE ACTUALLY REDUCE BLOOD PRESSURE IN RESISTANT HYPERTENSION? SPIRONOLACTONE COMBINATION AS A HOPE TO TREAT IT, A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS OF RANDOMIZED CONTROLLED TRIAL
Author Block:	Arya Simanjuntak, Felicita Gracia, Artha Maressa Theodora, Raehan Satya Deanasa, Putri Mahirah Afladhanti, Juwanto ., Ligat Pribadi Sembiring, Sari Harahap, Rosmaliana ., Universitas Riau, Pekanbaru, Indonesia
Abstract Body:	**Background:** Introduction: Resistant hypertension is a condition where blood pressure (BP) remains above the recommended target despite a combination of antihypertensive treatment. This study aims to analyze various therapies used to reduce systolic (SBP) and diastolic (DBP) blood pressure in RH patients, comparing their effectiveness in reducing mortality rates. **Methods:** Methods: This study was guided by PRISMA using various databases and screened to extraction according to the PICOS framework. Data was analysed using RStudio 2024.09.1 with the (netmeta) package. Data was presented as network plot and forest plot in analysing Mean Difference after therapy. **Results:** Result: From 2084 screening data, 24 RCTs were included. 3 antihypertensive combination (3aHT) was chosen as the comparator because it could be forwarded in netmeta. In reducing SBP, the combination of 3aHT with spironolactone ranked first which could reduce by 27.49 mmHg SBP (95%CI: -37.17 - -17.81) followed by the combination with Doxazosin, and Renal Denervation. After spironolactone, vitamin D, and renal denervation, the combination of 3aHT with lifestyle and other factors can lower DBP by 16.22 mmHg (95%CI: -17.58 - -7.47).

Conclusion: Conclusion: The combination of 3aHT with spironolactone showed the best reduction in SBP and DBP compared to other 3aHT and other therapies. However, since many medications have been discovered but RCTs have not yet been carried out, different combination therapy can still be created.



Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	40
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	FUNCTIONAL CORONARY ANGIOGRAPHY-DERIVED INDEX OF MICROCIRCULATORY RESISTANCE IN PATIENTS WITH MODEST REDUCTION IN KIDNEY FUNCTION AND CHRONIC CORONARY SYNDROME
Author Block:	Cheuk Lam Lui, Haochen Xuan, Kai Hang Yiu, The University of Hong Kong, Hong Kong, China
Abstract Body:	**Background:** We aim to evaluate the prognostic value of coronary microvascular disease (CMD), assessed by angiography-derived index of microcirculatory resistance (angio-IMR), in patients with modest reduction in kidney function with chronic coronary syndrome (CCS). **Methods:** We recruited patients who were at least 18 years old from January 2014 to December 2016 with diagnosis of CCS by conventional coronary angiography. Modest reduction in kidney function was defined as: estimated glomerular filtration rate ≥60 and <90 mL/min/1.73m^2 for 3 months. CMD was defined as: angio-IMR ≥ 25U. All patients had a median follow-up time of 5 years after successful coronary angiography. The primary endpoint of the study was major adverse cardiac events (MACE), a composite measure of cardiovascular death, heart failure and stroke. Association of angio-IMR with MACE was evaluated using Cox regression. **Results:** We recorded 53 MACEs in the total CCS population. Patients with CMD (angio-IMR ≥ 25) had a higher rate of MACE than patients without CMD (angio-IMR < 25) (8.5% v.s. 3.3%, p = 0.001). Among patients with modest reduction in kidney function, those with concomitant CMD (angio-IMR ≥ 25) had a higher rate of MACE than patients without CMD (angio-IMR < 25) (12.8% v.s. 3.3%, p = 0.001). In multivariate analysis, CMD (angio-IMR ≥ 25) was an independent predictor of MACE (HR: 3.74; 95% CI: 1.58-8.85; P = 0.003) in

patients with modest reduction in kidney function.
In CCS population, CMD (angio-IMR ≥ 25) patients had a lower survival rate than non-CMD (angio-IMR < 25) patients (log-rank P = 0.001). The same result was observed in patients with CMD (angio-IMR ≥ 25) when heart failure was investigated independently (log-rank P = 0.004). In patients with modest reduction in kidney function, patients with CMD (angio-IMR ≥ 25) had a poorer survival than patients without CMD (angio-IMR < 25) (log-rank P = 0.001).
Conclusion: CMD, assessed by angio-IMR, is common and can effectively predict the risk of MACE in patients with modest reduction in kidney function and CCS. This finding suggests the application of angio-IMR in patients with modest reduction in kidney function and CCS to evaluate CMD in routine clinical practice.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	41
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	GLUCAGON-LIKE PEPTIDE-1 RECEPTOR AGONIST IN THE REDUCTION OF MAJOR ADVERSE LIMB EVENTS AMONG PATIENTS WITH TYPE II DIABETES MELLITUS: A META-ANALYSIS
Author Block:	Raina Rose Palmera, Elaine Alajar, Noemi Pestaño, Bienvenido Tiu, Don Hale Hilario, Manila Doctors Hospital, Metro Manila, Philippines
Abstract Body:	**Background:** One common yet devastating complication of diabetes is amputation which leads to significant reduction of quality of life. Current guidelines recommend the use sodium glucose cotransporter 2 inhibitors (SGLT2i) and glucagon-like peptide-1 receptor agonists (GLP-1 RA) among patients with diabetes due to its proven beneficial effects in the reduction of major adverse cardiovascular events. However, conflicting data are associated with the use SGLT2i while there are limited literature on GLP1 RA in terms of limb outcomes. **Methods:** This review included randomized controlled trials (RCTs) that assessed the efficacy of GLP-1 receptor agonist versus placebo on top of standard of care among patients with T2 DM. A comprehensive electronic search through PubMed, Cochrane Central Register of Controlled Trials (CENTRAL), Google Scholar and Health Research and Development Information Network (HERDIN) were conducted. **Results:** Two studies (24,091 total sample size) were represented and included in the analysis. The results showed that there was a trend towards the reduction of risk of major adverse limb events (RR 0.77; CI 0.59-1.0) with the use of GLP-1 receptor agonist compared to placebo among T2 DM patients while there was no significant reduction in the risk of revascularization (RR 0.85; CI 0.69-1.03) and reduction in risk amputation (RR 0.83; CI 0.55-1.25). Only one study reported on gangrene (pooled sample of

10,781 patients) which showed no significant reduction in the risk of development of gangrene among T2DM patients in both without PAD (RR 0.86; 95% CI 0.51-1.46) and with PAD (RR 0.77; 95% CI 0.51-1.16). There was no outcome found in terms in terms of hospitalization due to lower extremity arterial event.

Conclusion: GLP-1 receptor agonist showed a trend towards reduction of major adverse limb events (MALE) among adult patients with T2 DM compared to placebo. However, this study failed to show significant reduction in the risk of amputation, risk of revascularization and risk of development of gangrene with the use of GLP-1 receptor agonist compared to placebo.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	42
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	MACHINE LEARNING IN PREDICTING CONCEALED ATRIAL FIBRILLATION FROM 12-LEAD ECG
Author Block:	Jui-Tzu Huang, Shih-Hsien Sung, Taipei Veterans General Hospital, Taipei, Taiwan

Abstract Body:

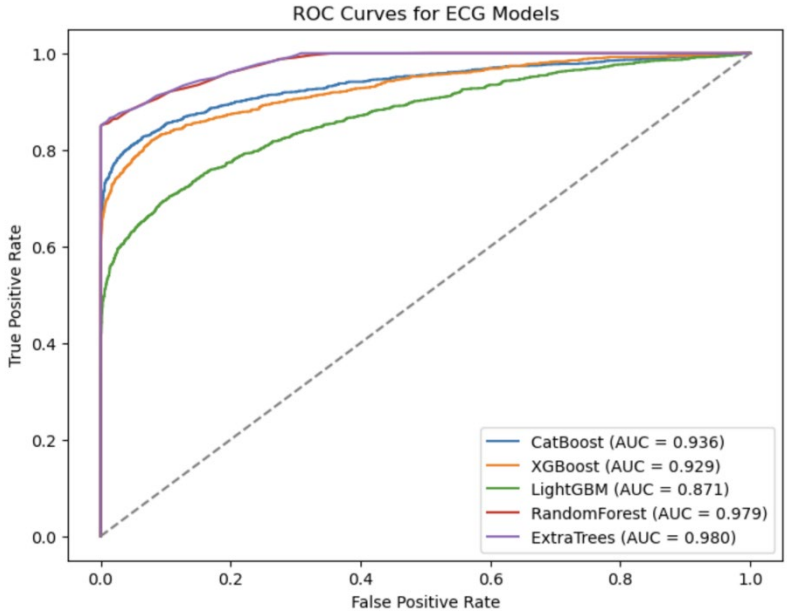
Background: Atrial fibrillation is a prevalent cardiac arrhythmia associated with significant morbidity and mortality. This study aims to develop machine learning models for predicting concealed Afib using ECG data of patients with sinus rhythm.

Methods: A total of 83160 patients were enrolled, with 80% (n=66528) allocated for training, 10% (n=8316) for testing, and 10% (n=8316) for internal validation. Patients with documented Afib within 30 days before ECG acquisition were excluded, and those with newly onset Afib within one year were classified as having incident Afib. Machine learning models were trained using tabular data with various algorithms, including CatBoost, XGBoost, LightGBM, Random Forest, and Extra Trees. Additionally, deep learning models were explored for image-based ECG data.

Results: Preliminary results demonstrated the diagnostic performance of these models in the validation cohort, with CatBoost emerging as a leading performer.

Conclusion: Ongoing efforts aim to refine model accuracy by incorporating text-based labels through NLP techniques such as BERT. Future directions include further data collection, outcome analysis, and model enhancements to assess the predictive value for stroke events and neurology ward

admissions.


ROC Curves for ECG Models
True Positive Rate
False Positive Rate
0.0
0.2
0.4
0.6
0.8
1.0
CatBoost (AUC = 0.936)
XGBoost (AUC = 0.929)
LightGBM (AUC = 0.871)
RandomForest (AUC = 0.979)
ExtraTrees (AUC = 0.980)

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	43
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	ADVERSE DRUG REACTION TO TINZAPARIN IN A PREGNANT WOMAN WITH DEEP VEIN THROMBOSIS: A CASE REPORT
Author Block:	Rio May Llanes, TIFFANY PEARL GUEVARRA, Elaine Alajar, University of the Philippines- Philippine General Hospital, Manila, Philippines
Abstract Body:	**Background:** Venous thromboembolism (VTE) represents a significant cause of pregnancy-related morbidity and mortality. Pregnancy and the puerperium are associated with an increased incidence of VTE occurring in around 0.05-0.20% of all pregnancies, and rates of pulmonary embolism of around 0.03%. Parenteral anticoagulation is the cornerstone for the treatment of acute venous thromboembolism. Low molecular weight heparin is widely used since it has greater bioavailability, more predictable dose response and longer half-life. **Case:** A 38-year old Filipino female at 14 weeks of gestation presented with left leg swelling and was diagnosed with deep venous thrombosis (DVT). Initial treatment with Enoxaparin was administered, but due to a lack of clinical improvement, the anticoagulant was switched to Tinzaparin. Shortly after initiating Tinzaparin, the patient developed erythematous patches on the skin with associated desquamation of the palms and marked hypereosinophilia. **Decision-making:** She was referred to the Allergy service, where a drug review identified Tinzaparin as the likely cause of the hypersensitivity reaction. Consequently, Tinzaparin was discontinued, and Enoxaparin was resumed. Following the switch back to Enoxaparin, the erythematous patches and hypereosinophilia resolved. The patient later delivered successfully via cesarean section without any maternal or fetal

complications.

Conclusion: The existing literature has reported only a limited number of adverse drug reactions to Tinzaparin. In our case, this reaction occurred in a pregnant Filipina with deep vein thrombosis. Given the limited availability of alternative treatments for this specific patient group, it is crucial to pursue an immediate allergologic evaluation to explore other therapeutic options. In our patient, a cutaneous hypersensitivity reaction to Tinzaparin was observed. Based on our experience, switching to an alternative low molecular weight heparin may be a viable option in such cases.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	45
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EXPLORING THE ROLE OF HYPERTENSION IN CORONARY ARTERY CALCIUM SCORE: INSIGHTS IN CHRONIC CORONARY SYNDROME
Author Block:	Suci Asriri, Hilfan Ade Putra Lubis, Ali Nafiah Nasution, Cut Aryfa Andra, Departement of Cardiology and Vascular Medicine, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia, Cardiovascular Departement, Adam Malik General Hospital, Medan, Indonesia
Abstract Body:	**Background:** Hypertension is a well-established risk factor for atherosclerosis and coronary artery disease, contributing to vascular remodeling, inflammation, and calcification. The Coronary Artery Calcium (CAC) Score, obtained through Computed Tomography Coronary Angiography (CTCA), serves as a non-invasive and reliable biomarker for quantifying coronary atherosclerosis. Despite the recognized role of hypertension in atherosclerosis, its relationship with CAC Scores in Chronic Coronary Syndrome (CCS) patients remains underexplored. **Methods:** A retrospective cross-sectional study was conducted among 300 CCS patients in hospital visit between March 2023 until March 2024. Patients underwent CAC scoring via CTCA and comprehensive risk factor assessment. Statistical analyses with multivariate regression were performed to evaluate the relationship between hypertension and other contributing factors in CAC Score. CAC Score greater than or equal to 1 was classified into positive score. **Results:** Based on multivariate analysis, hypertension was identified as the strongest independent risk factor for positive CAC Scores (p value = 0.017; OR = 1.97, CI: 1.119-3.484). Secondly, elevated LDL-C levels >100 mg/dL was also associated with positive CAC Scores (p value = 0.004; OR = 1.01, CI: 1,004-1,02). Conversely, female gender emerged as a protective factor

against coronary calcification (p value < 0.01; OR = 0.228, CI: 0.119-0.437). Smoking history demonstrated additional contributions to coronary calcification, although less pronounced compared to hypertension.
Conclusion: Hypertension strongly correlates with positive CAC scores, highlighting its role in coronary atherosclerosis progression in CCS patients. Effective blood pressure control is crucial to reduce coronary calcification and cardiovascular risks.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	46
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	FOUR-YEAR ALL-CAUSE MORTALITY PREDICTION IN TYPE 2 DIABETES MELLITUS PATIENTS INITIATING SGLT-2 AND DPP-4 INHIBITORS: A RETROSPECTIVE STUDY
Author Block:	Chenxu Wang, Qing-Wen Ren, Kai Hang Yiu, Rong Yin, Department of Medicine, The University of Hong Kong, Hong Kong, China, Division of Cardiology, Department of Medicine, the University of Hong Kong-Shenzhen Hospital, Shenzhen, China
Abstract Body:	**Background: OBJECTIVES** To evaluate and compare the performance of machine learning (ML) algorithms in predicting four-year all-cause mortality in T2DM patients initiating SGLT2 or DPP-4 inhibitors and to interpret the models to enable improved personalized management. **Methods: DESIGN, SETTING, AND PARTICIPANTS** This prognostic study utilized two territory-wide cohort of recorded adult individuals with diabetes who initiated treatment with an SGLT2 inhibitor or a DPP-4 inhibitor between January 1, 2015, and August 31, 2022, across multiple medical centers in Hong Kong, China and Taiwan, China for external validation. The follow-up records were updated in 2023. All the data analyses were completed between January 1, 2024, and November 27, 2024. **Results: RESULTS** This study included 100,655 DM patients, with 17,489 in the SGLT2 user cohort (mean age [SD], female (%), number of deaths within four-year of cohort entry (%), 63.4 years [12.2], 6,823 [39.0%], 4,349 [24.9%]) and 83,166 in the DPP-4 user cohort (70.3 years [12.5], 40,473 [48.7%], 24,621 [29.6%]). In the validation test set, AUROCs varied slightly across different models, with XGBoost model demonstrating balanced performance, achieving an AUROC of 0.82 (95% CI, 0.81-0.84) for the SGLT2 cohort and 0.85

(95% CI, 0.84-0.85) for the DPP-4 cohort. The four-year survival rate within the DPP-4 test sample was 46.93% (95% CI, 45.68%-48.22%) among patients predicted to die and 89.79% (95% CI, 89.22%-90.37%) among those predicted to survive. Similarly, in the SGLT2 test sample, the four-year survival rate was 51.91% (95% CI, 49.04%-54.94%) versus 90.46% (95% CI, 89.31%-91.63%). The validation in Taiwan is still in progress

Conclusion: CONCLUSIONS AND RELEVANCE Our prognostic study developed and validated ML models to predict four-year mortality among T2DM patients initiating SGLT2 and DPP-4 inhibitors, respectively, achieving relatively high performance. And using SHAP analysis, the interpretability of one of the best fitted models, XGBoost, was further examined. Our findings through feature analyses could assist physicians in personalizing patient interventions and optimizing pharmacotherapy.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	47
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	EXPERT CONSENSUS ON OPTIMIZING ANTIPLATELET THERAPY IN CHRONIC CORONARY SYNDROME: INSIGHTS FROM 3,650 MAN-YEARS OF CLINICAL EXPERIENCE AND A FOCUS ON CLOPIDOGREL FOR IMPROVED OUTCOMES
Author Block:	Saumitra Ray, Chandrashekhar Kashinath Ponde, Jagdish Hiremath, Manish Bansal, A. George Koshy, Devanu Roy, Arnab Dutta, johann christopher, Ezhilan J, Kiron Varghese, Aditya Kapoor, Tarun Dave, Prasant Kumar Sahoo, Arvind Kumar, Deepak Saha, DIDEPT, Manipal Hospital, Kolkata, India
Abstract Body:	**Background:** Chronic Coronary Syndrome (CCS) requires careful balancing of efficacy and safety in antiplatelet therapy. The DIDEPT (Dissemination on De-escalation and Escalation of Antiplatelet Therapy in CCS) initiative aimed to establish expert consensus and practical recommendations for optimal management. **Methods:** DIDEPT convened six meetings with 30 cardiovascular experts and 145 active participants, amassing 3,650 man-years of clinical experience. Among 19,998 registered clinicians, 4,660 attended webinars to evaluate 13 clinical statements using a 5-point Likert scale. A strong consensus was defined as a weighted score >75. **Results:** Strong consensus was achieved for 11 of the 13 statements. The highest weighted score (101.3) was attributed to the 2024 ESC Guidelines, emphasizing a patient-centered approach. Key agreements included de-escalation to clopidogrel for high bleeding risk (100.0), combination therapy with statins to reduce recurrent cardiovascular events (94.6), and abbreviated DAPT for high bleeding risk (93.0). Clopidogrel was strongly endorsed as the 'new aspirin' for monotherapy (92.6) and a cornerstone therapy post-PCI in combination with aspirin (91.8). Escalating therapy from aspirin to

clopidogrel (91.5) and the Risk Factor-Weighted Clinical Likelihood model for CAD prediction (89.0) also received significant support. Overall, clopidogrel monotherapy's superiority to aspirin was highlighted (87.5). The findings underscore the importance of personalized, evidence-based strategies for high bleeding risk patients, with overall mean response scores: agree: 52±8.4, strongly agree: 45±12, $p<0.0001$.

Conclusion: The DIDEPT findings highlights clopidogrel as a highly efficacious approach as compared to aspirin, reinforcing clopidogrel as a cornerstone therapy in CCS. Clopidogrel demonstrates a favorable safety profile, particularly in high bleeding risk scenarios, making it a reliable option for both efficacy and safety in long-term patient care. Aligning practices with updated guidelines that prioritize clopidogrel can optimize long-term outcomes through personalized strategies.

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	48
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	HTN & URIC ACID
Author Block:	Mohammad Sajid Ansari, Hind Institute of Medical Science Atariya Sitapur, Lucknow, India

Abstract Body:

Background: Introduction: Hyperuricemia, characterized by elevated serum uric acid levels, is increasingly recognized as an independent risk factor for hypertension, particularly in overweight and obese individuals. This study explores the relationship between serum uric acid levels, anthropometric parameters, and arterial blood pressure in an urban, overweight, and obese Indian population.

Methods: Methodology: A cross-sectional study was conducted on 224 drug-naive, overweight, and obese individuals from an urban area in North India. Anthropometric measurements, including body mass index (BMI), waist circumference, hip circumference, and sagittal abdominal diameter (SAD), were recorded. Serum uric acid levels were estimated using the uricase-peroxidase method, and arterial blood pressure was measured with an automatic digital sphygmomanometer. Pearson's correlation coefficient was used to assess the relationships between these variables.

Results: Results: The study found a moderate positive correlation between serum uric acid levels and both weight ($R = 0.308$, $p = 0.0005$) and BMI ($R = 0.39$, $p = 0.00005$). Significant correlations were also observed between serum uric acid and SAD ($R = 0.275$, $p = 0.002$), waist-to-hip ratio (WHR) ($R = 0.332$, $p = 0.00016$), and both systolic blood pressure (SBP) ($R = 0.698$, $p = 0.0001$) and diastolic blood pressure (DBP) ($R = 0.543$, $p = 0.0005$). No significant correlations were found between serum uric acid and other

anthropometric measures like waist circumference and hip circumference. Discussion: These results indicate that hyperuricemia is significantly associated with obesity-related measures and blood pressure, suggesting that it may play a role in the development of hypertension, particularly in individuals with central obesity.
Conclusion: Conclusion: The study underscores the importance of monitoring serum uric acid levels in overweight and obese populations as part of hypertension prevention and management strategies. Further research is needed to explore the underlying mechanisms and potential interventions to mitigate the risk of hypertension

Session Title:	**Sunday Poster Session**
Session Time:	Sunday, May 11, 2025, 8:40 am - 12:40 pm
Poster Board Number:	49
Topic 1:	Cardiovascular Disease Prevention
Publishing Title:	THE RED BALLOON: A CASE OF 60 YEARS OLD MALE WITH GIANT ABDOMINAL AORTIC ANEURYSM
Author Block:	Bienvenido Tiu, Jorge A. Sison, Manila doctors hospital, Manila, Philippines
Abstract Body:	**Background:** Giant abdominal aneurysm defined as aneurysm with diameter of more than >10 to 13 cm in the maximum transverse diameter. Several risk factors were identified such as hypercholesterolemia, advance age, male sex, hypertension, smoking, family history and connective tissue disease. **Case:** We report a case of a 60 year old Filipino male known hypertensive and chronic smoker with no family history of aneurysm and connective tissue disease who presented with visible pulsatile mass on hypogastric region and associated with left lower quadrant pain radiating at the back. Upon admission CT aortogram was done and revealed giant infrarenal fusiform aneurysm measuring by 11.6 x 9.4 cm x 16.9 cm (T x AP x L) with dilatation of the proximal bilateral common iliac arteries each measuring 2.6 cm in diameter. Open surgical approached was the best option of treatment over endovascular repair (EVAR) to the patient due to unfavorable neck anatomy of the infrarenal aneurysm that may greatly affect the device delivery. Patient underwent exploratory laparotomy with Endoaneurysmorrhapy and bifurcated graft aortoiliac anastomosis with intraoperative findings of 12 cm in transverse diameter of fusiform infrarenal aneurysm extending to bilateral common iliac arteries. Patient improved and was discharged after 10 days. **Decision-making:** Open surgical repair via transabdominal or retroperitoneal approach has been the gold standard however endovascular repair may be suitable for those patients with severe heart disease and or/ other

comorbidities that may preclude open repair. As in our patient open repair was the choice of procedure. Endovascular repair did not fit with our patient due to anatomic factors that would greatly affect the device delivery
Conclusion: We highlight the significant of giant aneurysms with prevalence of 0.03%. Still unknown the exact mechanism of giant abdominal aneurysm which reached this size and remains unruptured.