

出國報告(出國類別：會議)

ESC CONGRESS BARCELONA 2014

服務機關：衛生福利部基隆醫院

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派赴國家：西班牙巴塞隆納

出國期間：103年8月30日至103年9月3日

報告日期：103年9月

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壹、摘要

此行於民國 103 年 8 月 30 日至 9 月 3 日至西班牙巴塞隆納參加 2014 歐洲心臟學會年會，歐洲心臟學會於歐盟實際運作之後，規模一年比一年盛大，與美國心臟學會並列兩大世界心臟專家參與的會議，其公布的治療指引(Treatment Guideline)也越來越被世界各地所接受，不再只是美國心臟學會獨領風頭，今年最主要有全新的治療指引發表，同時在各大心臟科學領域也有豐富的研究成果發表，並有最新的治療工具，藥物試驗結果，可與世界各國的專家們參與討論並將結果帶回院內與各科專家討論，收穫頗豐。

貳、本文

一、目的：

此行最主要目的是參與會議並帶回新的治療指引，歷經過署立醫院事件後本院心臟科一直處於人事異動的情形，終於今年狀況稍減，但對於病患的治療並不能懈怠仍然必須與時俱進，同時也可以與他國心臟科專家與我國一同與會的學者討論病患與心臟科將來走向與治療上的意見。因本院規模屬於區域醫院且與社區合作緊密，參加會議的過程主要集中在一般心臟醫學(general cardiology)，預防性心臟科學(prevention cardiology)以及本人的臨床專長介入性心臟科學(intervention cardiology)。

二、過程

I PREVENTION / REHABILITATION / SPORTS / NURSING			
0:30-12:00			
Helsinki (The Hub)	Central Village	Prevención y rehabilitación cardiovascular: métodos en España	p. 20
1:00-12:30			
Berlin	Village 8	Smoking - major problem in clinical practice	p. 26
Prishtina	Village 8	Hot topics in risk prediction	p. 27
2:15-13:45			
Helsinki (The Hub)	Central Village	Atrial fibrillation: an old problem with new solutions?	p. 29
2:30-13:30			
Moderated poster corner	Central Village	Improving risk prediction models	p. 32
1:30-15:00			
Berlin	Village 8	Cardiovascular disease prevention - effects of migration and ethnicity	p. 40
Copenhagen	Village 8	Mediterranean diets, polyphenols and cardiovascular disease	p. 40
Prishtina	Village 8	Innovations in exercise training and rehabilitation	p. 41
1:00-15:30			
Helsinki (The Hub)	Central Village	Implementation of Clinical Practice Guidelines: what's the nurse's role?	p. 42
ARRHYTHMIAS			
1:00-12:30			
Il Aviv	Village 9	Closing the mortality gap in atrial fibrillation	p. 27
Prishtina	Village 9	Innovations in the management of sudden cardiac death	p. 28
2:30-13:30			
Moderated poster corner	Central Village	Catheter ablation beyond atrial fibrillation	p. 29
1:30-15:00			
Prishtina	Village 9	Practical aspects on stroke prevention in atrial fibrillation	p. 41
Il Aviv	Village 9	Innovations and understanding of vasovagal syncope	p. 41
Prishtina	Village 9	Implantable cardioverter defibrillator in real life	p. 42
5:30-16:30			
Prishtina	Village 7	Cardioversion in Europe - New trends and treatments Sponsored by Cardiome International AG	p. 43
5:30-17:00			
Il Aviv	Village 9	Anticoagulation and atrial fibrillation: emerging insights Sponsored by Thrombosis Research Institute London	p. 45
I MISCELLANEOUS			
1:00-12:30			
Prishtina	Village 9	Mobility of physicians in Europe ESC and the Cardiology Section of the Union of European Medical Specialists	p. 27
1:00-12:45			
Prishtina (The Hub)	Central Village	Registry Hot Line: Interventions, devices and outcomes	p. 21
1:00-16:00			
Poster area	Central Village	Poster session 1	p. 46
1:30-15:00			
Prishtina	Central Village	Take home message for practitioners	p. 34
Prishtina (The Hub)	Central Village	Surveying the European cardiovascular research landscape: results from CardioScape	p. 34
Prishtina (The Hub)	Central Village	Innovation and the Heart I	p. 35
1:00-18:00			
Barcelona	Central Village	Inaugural Session	p. 45
1:00-19:00			
		Networking reception in ESC Plaza	

08:30-10:00				
agreb	Village 5	Carotid disease and stroke: imaging the risk		p. 79
09:00-11:00				
moderated poster corner	Central Village	PCI complications and patient subsets		p. 85
lands-On Room 2	Hands-On Tutorials	Challenging cases in cardiac computed tomography: arrhythmia		p. 7
		Sponsored by Toshiba Medical Systems		
1:00-12:30				
budapest	Village 5	Stent failure: update on mechanisms and treatment		p. 94
iga	Village 5	Rare vascular diseases: out of sight, out of mind?		p. 94
agreb	Village 5	Percutaneous aortic and mitral valve repair		p. 95
4:00-15:00				
lands-On Room 2	Hands-On Tutorials	Coronary subtraction - Improving the evaluation of calcified coronary arteries on computed tomography		p. 9
		Sponsored by Toshiba Medical Systems		
4:00-15:30				
budapest	Village 5	How to improve outcomes in TAVI patients		p. 137
iga	Village 5	Highlights from EuroPCR 2014: main burning questions in interventional cardiovascular interventions		p. 138
agreb	Village 5	Critical limb ischaemia: a new challenge		p. 138
5:30-16:30				
moderated poster corner	Central Village	Valve surgery: from prediction to outcome		p. 144
5:30-18:00				
iga	Village 5	New insights in pharmacotherapy of peripheral circulation		p. 152
agreb	Village 5	New and unique: treatment of structural heart disease		p. 152
I HEART FAILURE / LEFT VENTRICULAR DYSFUNCTION				
8:30-10:00				
airut	Village 6	Relevant new biomarkers in heart failure		p. 80
icosia	Village 6	Advanced heart failure: what more can we do?		p. 80
eykjavik	Village 6	Tackling acute heart failure		p. 80
0:00-11:00				
moderated poster corner	Central Village	Important issues below the surface		p. 84
0:10-10:50				
luxembourg (The Hub)	Central Village	Meet the Trialist I: PARADIGM-HF		p. 88
1:00-12:30				
helsinki (The Hub)	Central Village	Prognosis in heart failure: science and uncertainties		p. 89
airut	Village 6	Controversies in exercise training in heart failure		p. 95
icosia	Village 6	How to set up a heart failure service?		p. 95
eykjavik	Village 6	The kidney in heart failure: update 2014		p. 95
2:45-13:45				
odgorica	Village 2	Sleep disordered breathing in heart failure; time for cardiologists to take control		p. 127
		Sponsored by ResMed		
rague	Village 3	The RAASi debate: should RAAS blockade continue with a declining eGFR?		p. 128
		Sponsored by ZS Pharma, Inc.		
agreb	Village 5	The power of prevention: cardiovascular disease in type 2 diabetes		p. 129
		Sponsored by Takeda Pharmaceuticals International		
bilisi	Village 7	Improving outcomes for heart failure patients		p. 130
		Sponsored by St Jude Medical		
1:00-13:45				
linius	Village 9	Ongoing management of the complex patient with cardiovascular disease and apnea: interactive case discussions		p. 132
		Sponsored by Philips Respironics		
1:00-15:30				
airut	Village 6	How to pre-select responders to cardiac resynchronisation therapy?		p. 138
icosia	Village 6	Curing cancer, killing the heart		p. 138
eykjavik	Village 6	What the busy cardiologist needs to know about heart failure - messages from the recent HFA Congress		p. 138
15:30-16:30				
moderated poster corner	Central Village	Non-pharmacological issues in advanced heart failure		p. 142

ISCHAEMIA / CORONARY ARTERY DISEASE / ACUTE CARDIAC CARE / ACUTE CORONARY SYNDROMES

08:30-10:00			
Antana	Village 7	Antithrombotic therapy in NSTEMI-ACS subgroups	p. 191
Antofia	Village 7	Optimal antithrombotic strategies in acute coronary syndrome	p. 191
Antofili	Village 7	Immune mechanisms in acute myocardial infarction	p. 192
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Antelsinki (The Hub)	Central Village	Meet the Trialist II: SOLID-TIMI 52 Trial	p. 198
Antembourg (The Hub)	Central Village	Meet the Trialist III: SIGNIFY	p. 198
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Antelsinki (The Hub)	Central Village	Improving outcomes in STEMI	p. 200
Antana	Village 7	Assessment of coronary atherosclerosis and plaque vulnerability to guide treatment	p. 206
Antofia	Village 7	Challenging decision making in ischaemic heart disease	p. 206
Antofili	Village 7	Clinical outcome of cardioprotection trials	p. 207
12:45-13:45			
Antaris	Village 1	Managing inflammation in cardiovascular disease: debating the rationale for interventions Organised by Academic Medical Center Amsterdam / Course Director: John Kastelein / Supported by an unrestricted educational grant from Physicians' Academy for Cardiovascular Education	p. 235
Antome	Village 1	20 years clinical use of GP IIb/IIIa receptor antagonists: what have we learned and where to go? Organised by Leiden University Medical Centre / Course Director: Wouter Jukema / Supported by an unrestricted educational grant from Physicians' Academy for Cardiovascular Education	p. 235
Antrague	Village 3	Coagulation assessment in patients treated with novel oral-anticoagulants: new developments and practical guidance Sponsored by Diagnostica Stago / Bayer HealthCare / Daiichi Sankyo / Boehringer Ingelheim / Bristol-Myers Squibb and Pfizer Alliance	p. 236
Antirut	Village 6	Confronting the challenges of ischemic heart disease: the role of optimizing cardiac energy metabolism Organised by University of Pisa / Course Director: Mario Marzilli / Supported by an unrestricted educational grant from SERVIER	p. 238
Antitana	Village 7	Back in Barcelona with PLATO: 5 years of practice, guidelines and controversies Sponsored by AstraZeneca	p. 238
13:00-13:45			
Antinius	Village 9	How to use biomarkers to optimize diagnosis, prognosis and treatment of acute coronary syndrome Sponsored by Roche Diagnostics	p. 241
13:00-15:30			
Antitana	Village 7	New insights in stent thrombosis	p. 248
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Moderated poster corner	Central Village	Topics in acute coronary syndromes	p. 253
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Antembourg (The Hub)	Central Village	Novel trials and new horizons with dabigatran: protecting patients at high risk of cardiac events and stroke Sponsored by Boehringer Ingelheim	p. 256
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Antitana	Village 7	Coronary artery disease in chronic inflammatory diseases	p. 264
Antofia	Village 7	Mechanical circulatory support: what is the evidence?	p. 265
Antofili	Village 7	State of the Art - Innovation in acute coronary syndromes	p. 265
18:30-20:00			
Antirut & Nicosia	Village 6	Heart rate reduction: questions and answers in the management of coronary artery disease Sponsored by SERVIER	p. 295
19:30-20:00			
Antpenhagen	Village 8	Prevention of atherothrombotic event episodes: can we do better? Sponsored by MSD	p. 295
PREVENTION / REHABILITATION / SPORTS / NURSING			
19:30-10:00			
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14:00–15:30				
Athens	Village 4	Bicuspid aortic valve disease: an overlooked condition		p. 357
Bishkek	Village 4	Infective endocarditis		p. 357
Cairo	Village 4	Translational research and hot clinical topics in cardiomyopathies		p. 357
15:00–16:30				
Hands-On Room 3		3D-transesophageal echocardiography in clinical practice: candidate selection and therapeutic guiding of percutaneous valve repair using percutaneous mitral valve repair therapy		p. 17
Hands-On Tutorials		Sponsored by Philips Healthcare		
15:30–16:30				
Moderated poster corner		News from the aortic valve		p. 363
Central Village				
16:30–18:00				
Bishkek	Village 4	The 2014 ESC Guidelines for pulmonary embolism: hot topics		p. 372
Cairo	Village 4	Access for transcatheter aortic valve implantation		p. 372
■ INTERVENTIONS / PERIPHERAL CIRCULATION / STROKE / SURGERY				
18:30–10:00				
Barcelona	Central Village	ESC/ESA Guidelines on non-cardiac surgery: cardiovascular assessment and management The Committee for Practice Guidelines		p. 298
Brussels	Central Village	Treatment dilemmas in percutaneous cardiovascular interventions – Global focus		p. 298
Luxembourg (The Hub)	Central Village	Nightmares in the cath lab		p. 299
Skopje (The Hub)	Central Village	Transcatheter aortic valve implantation: what's next?		p. 299
Budapest	Village 5	Bioresorbable scaffolds - disappearing but here to stay?		p. 303
Zagreb	Village 5	New strategies to reduce percutaneous coronary intervention communications		p. 303
10:00–11:00				
Moderated poster corner		Fractional flow reserve: objective measurement		p. 309
Central Village				
11:00–12:30				
Skopje (The Hub)	Central Village	Percutaneous coronary intervention outcomes: think long-term		p. 314
Budapest	Village 5	Complex multivessel disease		p. 318
Riga	Village 5	Pre-operative assessment prior to non-cardiac surgery		p. 318
Zagreb	Village 5	What does a cardiologist need to know about deep venous thrombosis?		p. 319
14:00–15:30				
Budapest	Village 5	Hot topics in STEMI interventions		p. 357
Riga	Village 5	Anticoagulants and antiplatelets - new perspectives ESC and the International Society of Cardiovascular Pharmacotherapy		p. 358
Zagreb	Village 5	Intracoronary imaging: insights		p. 358
15:30–16:30				
Moderated poster corner		TAVI: what predicts outcome?		p. 364
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15:30–18:00				
Skopje (The Hub)	Central Village	Predictors of outcome in coronary artery bypass grafting		p. 369
Budapest	Village 5	Acute aortic syndromes; what the cardiologist needs to know		p. 373
Zagreb	Village 5	Peripheral artery disease: higher burden, more solutions		p. 373
■ HEART FAILURE / LEFT VENTRICULAR DYSFUNCTION				
18:30–10:00				
Berlin	Village 6	Treating comorbidities in heart failure		p. 303
Reykjavik	Village 6	Biomarkers in heart failure. New insights		p. 304
10:00–11:00				
Moderated poster corner		Important influences of heart failure management		p. 308
Central Village				
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Skopje (The Hub)	Central Village	Targeting for improvement in exercise capacity in HF: the CONFIRM-HF study Sponsored by Vifor Pharma		p. 312
11:00–12:30				
Berlin	Village 6	Update on mechanical circulatory support		p. 319
Los Angeles	Village 6	Transatlantic differences in heart failure management		p. 319
Reykjavik	Village 6	Cardio-oncology: preventing and managing cardiotoxicity		p. 319

1:30–10:00			
airo	Village 4	The importance of mitral regurgitation in aortic stenosis	p. 408
INTERVENTIONS / PERIPHERAL CIRCULATION / STROKE / SURGERY			
1:30–10:00			
opje (The Hub)	Central Village	Thoracic aortic disease: from screening to treatment	p. 405
ga	Village 5	The evolving role of surgical and percutaneous mitral annuloplasty	p. 408
HEART FAILURE / LEFT VENTRICULAR DYSFUNCTION			
1:30–10:00			
xembourg (The Hub)	Central Village	Tips & tricks in acute heart failure	p. 404
cosia	Village 6	Challenges in the management of advanced heart failure ESC and the Brazilian Society of Cardiology	p. 408
ISCHAEMIA / CORONARY ARTERY DISEASE / ACUTE CARDIAC CARE / ACUTE CORONARY SYNDROMES			
1:30–10:00			
ietta (The Hub)	Central Village	Coronary vasospasm and microvascular dysfunction	p. 406
ria	Village 7	What you should know about high-sensitivity troponins and novel cardiac stress markers	p. 408
ilisi	Village 7	Acute cardiorenal syndrome in tomorrow's world	p. 409
PREVENTION / REHABILITATION / SPORTS / NURSING			
1:30–10:00			
openhagen	Village 8	Critical strategies to reduce global and regional cardiovascular disease risk ESC and the World Heart Federation	p. 409
istina	Village 8	Obesity - a "heavy" risk factor?	p. 409
ARRHYTHMIAS			
1:30–10:00			
Aviv	Village 9	Borderline indications in implantable cardioverter-defibrillator	p. 409

三、心得

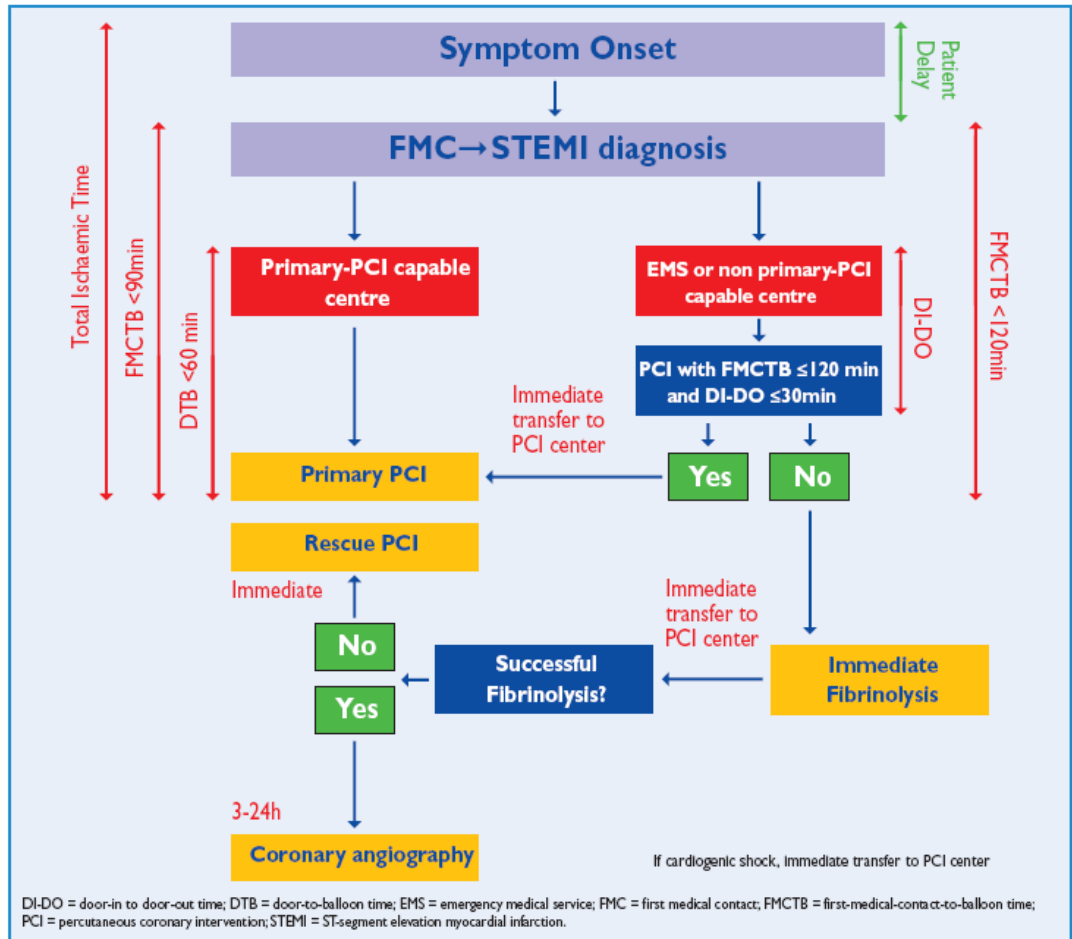
2014 年歐洲心臟醫學會在西班牙巴塞隆納舉行，日期為 2014 年 8 月 30 日至 9 月 3 日，巴塞隆納自 1992 年舉辦奧運之後，多處場地增建為國際會議場地，因此已有多次歐洲心臟醫學會義在此舉行。會議第一天為大會報到手續為主，因此次參加人數超過三萬名故報到時間極為冗長，主要重要議題在第二日至第四日居多。



歐洲心臟學會與美國心臟學會是目前世界兩大心臟科會議，因此參加人數眾多且討論範圍廣泛。此次會議有幾大主軸包含影像學(IMAGING)，基礎科學(BASIC SCIENCE)，高血壓(HYPERTENSION)，瓣膜性心臟病/肺高壓/心肌疾病(VALVULAR DISEASE/PULMONARY HYPERTENSION/MYOCARDIAL DISEASE)，介入性心臟科學(INTERVENTION)，心衰竭(HEART FAILURE)，缺血性心臟病(ISCHEMIA)，預防性心臟科學(PREVENTION)以及心律不整(ARRHYTHMIA)。於大會議場內的不同場地舉辦。

此次歐洲心臟醫學會最重要應是多項治療指引的大幅更新(ESC guideline 2014)，且由治療指引的負責人(Director)在會議中公布並討論內容與更新目的，其中兩項指引對於一般心臟科醫師最為實用，第一是 ESC Guidelines on myocardial revascularization，第二是 Atrial fibrillation management。

關於第一項 myocardial revascularization, 急性心肌梗塞 STEMI 目前歐美已經不再討論舊有的 Door-to-balloon time 而是以 FMC(Frist Medical Contact)至氣球擴張術打開血管的時間來要求, 另外若是不能進行心導管的醫院進行血栓溶解術也是要求在 30 分鐘內要完成。且必須事後立即轉送至可以進行心導管的醫院, 簡圖如下:



如果病人今天呼叫 119, 在歐美可以於救護車上完成心電圖並雲端傳送至負責醫院評估是否為 STEMI, 若確診在救護車上即開始一連串治療措施包含給予抗血小板藥物, 氧氣, IV 等初步治療, 並且評估病人是否可以送到緊急心導管的醫療院所, 如果可以進行緊急心導管則要求時間能夠小於 90 分鐘內。

但是目前國內的 EMT 系統若是要求在車上給予藥物在實務上仍有困難(醫療責任問題難以釐清)另外是心電圖的判斷目前仍難以在救護車上就完成相關處理。

另外 STEMI 藥物的選擇也有相關建議, 之前建議使用 Aspirin + Clopidogrel 作為雙重抗血小板藥物, 此次已經建議首選為 Aspirin + Ticagrelor / Prasugrel 作為雙重抗血小板藥物除非有相關禁忌症。目前國內與本院有 Ticagrelor 作為使用選項。

Prasugrel 此藥物並未進入我國健保給付藥物因此國內未常規使用。而慢性穩定性心絞痛此次建議與之前相差不大，多在強調控制危險因子的重要性例如低密度膽固醇蛋白 LDL 必須控制在 70mg/dL 以下。

第二項關於心房顫動(Atrial fibrillation)與缺血性中風(Ischemic stroke)，目前 Aspirin 的角色已經相當被忽略，轉而要求抗血栓藥物包含 Warfarin 以及 NOAC (New Oral Anti-Coagulation)藥物。在亞洲人的相關研究中，Warfarin 的壞處相對於西方人種來的高無論是在腦出血或是其他相關出血副作用。因此 NOAC 類藥物的選擇相對來的較佳，有較低的副作用且預防中風的好處並不輸給傳統藥物，另外服用藥物不需時時監測 INR，對於病人也較方便且順從性更佳。因此目前藥物使用前首先要計算 CHA2DS2-VASc score 評估中風危險分數高低。若分數一分以上就建議要使用抗血栓藥物，相對是嚴格計算但預後較好。

CHADS2 – VASc Score		
C	Congestive Heart Failure	1
H	Hypertension (>140/90 mmHg)	1
A	Age \geq 75	2
D	Diabetes Mellitus	1
S₂	Prior TIA or stroke	2
V	Vascular disease (MI, aortic plaque etc)	1
A	Age 65-74	1
Sc	Sex category (Female = 1 pt)	1

而目前 NOAC 的選擇已被許可者如下圖所示：

Comparison of new oral anticoagulants (NOACs)				
	Dabigatran		Apixaban	Rivaroxaban
	150 mg BID	110 mg BID	5 mg (2.5 mg) BID	20 mg (15 mg) OD
Benefit over warfarin	Superior	Equivalent	Superior	Equivalent
Clinically significant reduction in ICH vs warfarin	Yes	Yes	Yes	Yes
Reduction in major bleeding vs wafrarin	Equivalent	Yes	Yes	Equivalent
CrCl >50 ml/min	150 mg BID	110 mg BID	5 mg BID	20 mg OD
CrCl 30 – 49 ml/min	150 mg BID	110 mg BID	5 mg BID	15 mg OD
CrCl >25 ml/min	- - -	- - -	2.5 mg or 5 mg BID	- - -
CrCl >30 ml/min plus age ≥80 years	- - -	110 mg BID	2.5 mg or 5 mg BID	15 or 20 mg OD depends on CrCl
Special considerations	75 mg BID approved in USA for CrCl 15–29 ml/min, but not in Canada. No RCT data with this dose in patients with atrial fibrillation		Consider 2.5 mg BID if at least 2 of the following exists: 1) Age: ≥80 years 2) Weight: ≤60 Kg 3) Serum creatinine ≥133 (µM/L) (1.5 mg/dL)	
Antidote	<ul style="list-style-type: none"> • None available for NOACs • Vitamin K and PCC for warfarin. However, significant morbidity and mortality persists in patients with warfarin induced ICH despite rapid correction of INR • Pooled data from NOAC trials suggest ~50% reduction in ICH. Consequently for those using NOACs, there will be less ICH cases where "reversal therapy" would be required 			
NOAC is not recommended with	<ul style="list-style-type: none"> • Mechanical valves • Valvular heart disease (primarily rheumatic heart disease/mitral stenosis) • Severe blood dyscrasias with clinically significant anemia, thrombocytopenia 			
CrCl: Creatinine clearance; ICH: Intracranial hemorrhage; INR: International normalized ratio; PCC: Prothrombin complex concentrates; RCT: Randomized clinical trial Refs: Dowlatshahi D, et al. 2012. Stroke. 2012; 43:1812-1817 Skanes AC, et al. Can J Cardiol 2012;28:125-136				

目前對於亞洲人的研究此三個藥物以第一個 Dabigatran 結果最佳，但只限於心房顫動預防中風方面，對於肺動脈栓塞以及深層靜脈血栓尚未拿到許可證。

此次參加歐洲心臟學會最大的感受是台灣目前的醫療水準其實軟體上與先進國家相比差距不多，但是藥物的選擇上受限於健保條件許多歐美已經奉為準則的藥物卻無法使用或是限制頗多，如何在現行體制與病人權益上的選擇的確為一大難題。另外參加醫學會可以得到許多第一手研究的結果發表並可以了解研究設計目的與背後意涵，此外也是即時更新臨床上的治療導向以免落後於標準。在忙碌的臨床工作

之餘許多醫師都沒時間去取得新知，定時的參加醫學會、瀏覽國際期刊，才不至於成為「舊時代產物」。

四、建議事項

目前醫學研究每 10 年的研究結果與治療方向常常有相當大的變化，在我們於醫學院求學實習的時代所學的與現在臨床實務遇到的常常有出入，舉例心導管以前只發明了氣球擴張術，現在卻變成心臟支架的時代，之後更可能演變成全生物可吸收材料的時代。醫生執業生涯少則 20 年多則 40~50 年，因次適時的更新知識並與世界接軌是必須的，否則將來病患發現自己長久信賴的醫院與醫師一直在用舊時代的物品治療自己，情何以堪，而且也會降低本身的競爭力，目前醫療市場多由私人財團企業所割據，公立體系醫院必須更加緊腳步更上避免被淘汰。參加醫學會或許有醫師會覺得像個大拜拜的活動，但是實際參加討論會議才會得到收穫。建議院方以及部內可以鼓勵醫師參加醫學會並且改善人力問題，改善常有一人身兼多職的狀況，也可以避免病人的流失與業務下滑。