TCTAP, 2024. April 26 5:43 PM ~ 5:51 PM (8min) Presentation Room 1 All About New Data of Antithrombotics

Long-term DOAC Management of AF and Stable CAD

: Expectation on the EPIC-CAD Trial After the AFIRE Trial

Gi-Byoung Nam MD Asan Medical Center



Disclosure

Research fund from Daiichi-Sankyo (Tokyo, Japan) and Daewoong Phamaceutical Co., Ltd (Seoul, Korea)

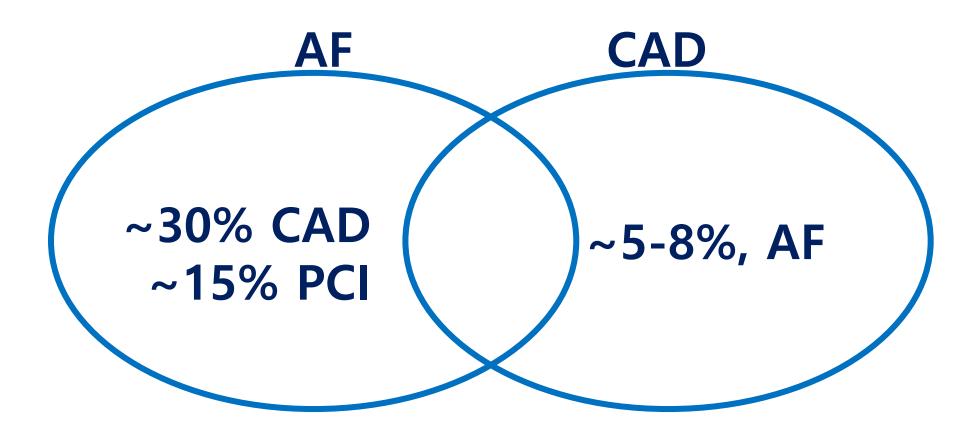


Contents: Patients with AF and CAD (ACS, PCI, CAD)

- 1. Overview on antithrombotic management, in AF and CAD
- 2. Early after PCI, from triple to dual anti-thromb. Rx (WOEST, PIONEER, RE-DUAL, ENTRUST to AUGUSTUS)
- 3. Late after PCI, from dual anti-thromb. to single OAC alone (OAC trial, AFIRE, EPIC-CAD)
- 4. Introduction to EPIC-CAD and its clinical implications



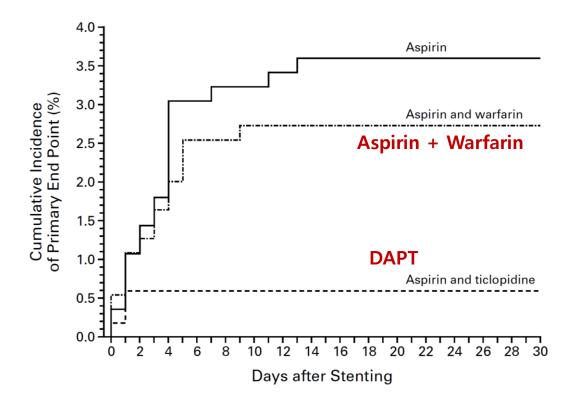
CAD is present in 20-30% of pts w AF, half of them, requiring PCI. The incidence of AF in patients with ACS: 10% to 21%





Circulation. 2014;130:e199-e267 AF guideline Lancet. 2013;381:1107-1115 The American Journal of Medicine (2014) 127, 579-585

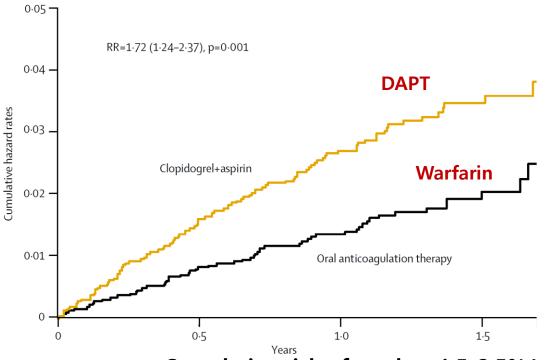
ANTITHROMBOTIC-DRUG REGIMENS AFTER PCI



DAPT >> OAC

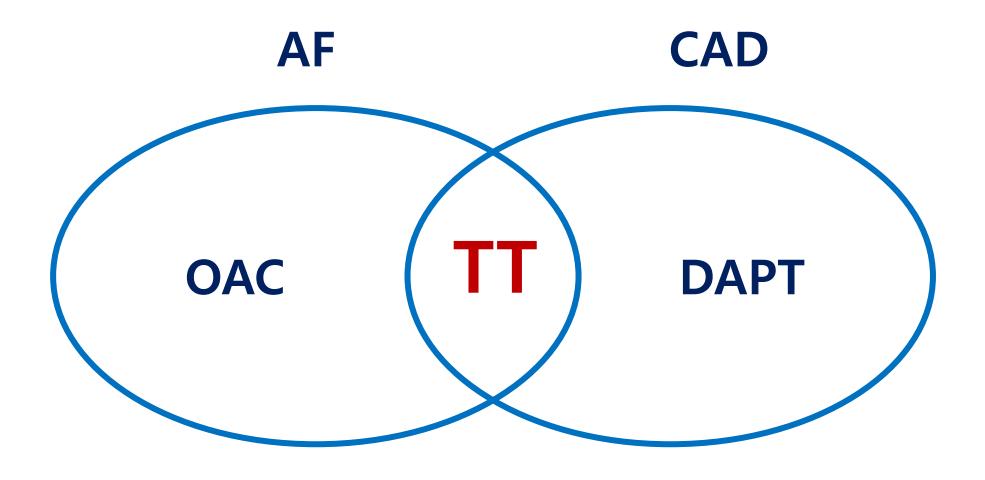
서울아산병원 Asan Medical Center

DAPT vs oral anticoagulation for AF : DAPT is not enough



Cumulative risk of stroke.. 1.5-2.5%/year

DAPT << OAC

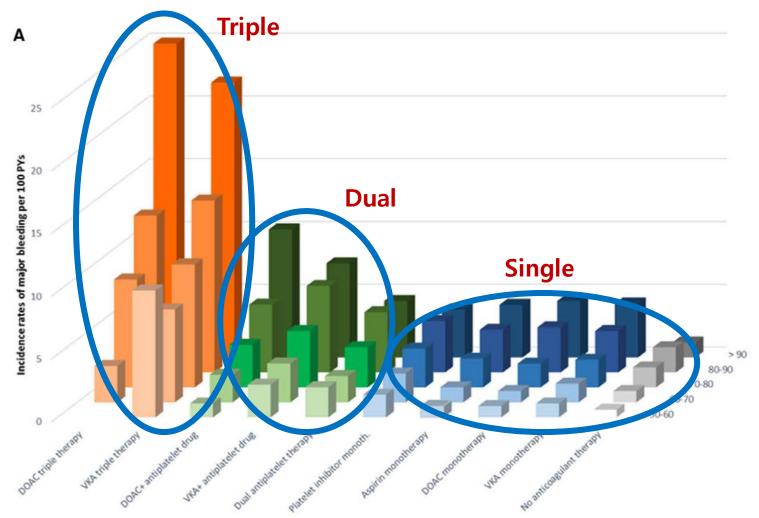


TT: triple therapy (OAC+DAPT)



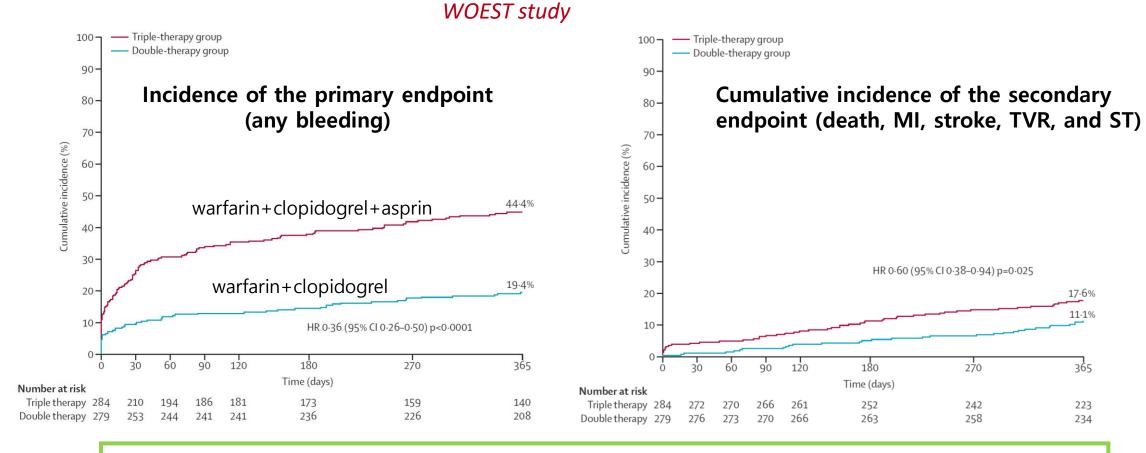
Major Bleeding Rates in Atrial Fibrillation Patients on Single, Dual, or Triple Antithrombotic Therapy

Results From a Nationwide Danish Cohort Study





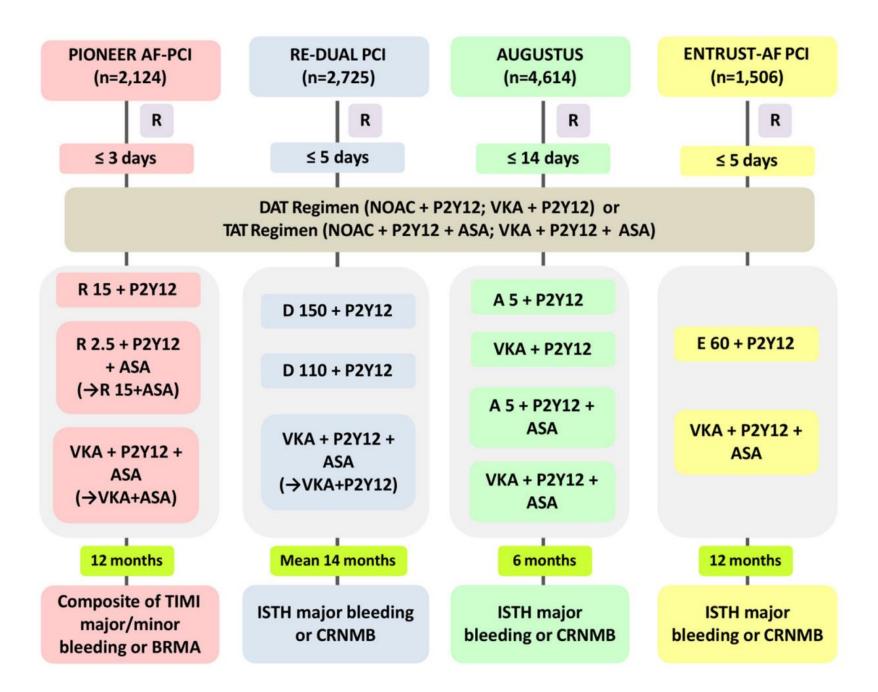
Use of clopidogrel with/without aspirin in pts taking OAC Rx and undergoing PCI: an open-label RCT



Use of clopiogrel without aspirin was associated with a significant reduction in bleeding complications and no increase in the rate of thrombotic events.



Lancet 2013; 381: 1107-15





Safety/efficacy outcomes of double vs. triple antithrombotic Rx in pts w AF following PCI

ALL-CAUSE DEATH

	NOAC_	DAT	VKA_	TAT		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
AUGUSTUS	39	1153	34	1154	23.4%	1.15 [0.73, 1.81]	-
ENTRUST AF-PCI	46	751	37	755	27.1%	1.25 [0.82, 1.90]	
PIONEER AF-PCI	16	694	13	695	9.2%	1.23 [0.60, 2.54]	
RE-DUAL PCI	85	1744	48	981	40.3%	1.00 [0.71, 1.41]	+
Total (95% CI)		4342		3585	100.0%	1.12 [0.90, 1.39]	•
Total events	186		132				
Heterogeneity: Tau2 =	= 0.00; Ch	$ni^2 = 0.7$	78, df =	3 (P =	0.85); 12 =	0%	0.01 0'1 10 100'
Test for overall effect	Z = 0.99	P = 0	.32)				6.01 0.1 1 10 100 Favours NOAC_DAT Favours VKA_TAT

CARDIOVASCULAR DEATH

	NOAC_	DAT	VKA_7	ГАТ		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
AUGUSTUS	32	1153	28	1154	30.0%	1.14 [0.69, 1.89]	-
ENTRUST AF-PCI	17	751	16	755	16.5%	1.07 [0.54, 2.10]	
PIONEER AF-PCI	15	694	11	695	12.7%	1.37 [0.63, 2.95]	
RE-DUAL PCI	58	1744	31	981	40.9%	1.05 [0.69, 1.62]	+
Total (95% CI)		4342		3585	100.0%	1.12 [0.85, 1.47]	•
Total events	122		86				
Heterogeneity: Tau2 :	= 0.00; Ch	$ni^2 = 0.3$	36, df =	3 (P =	0.95); 12 =	= 0%	h
Test for overall effect	Z = 0.80	(P = 0	.43)				0.01 0.1 1 10 100' Favours NOAC DAT Favours VKA TAT

STROKE

	NOAC	DAT	VKA_	TAT		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
AUGUSTUS	5	1153	12	1154	16.4%	0.42 [0.15, 1.18]	
ENTRUST AF-PCI	10	751	12	755	25.6%	0.84 [0.36, 1.93]	
PIONEER AF-PCI	8	694	7	695	17.4%	1.14 [0.42, 3.14]	
RE-DUAL PCI	26	1744	13	981	40.6%	1.13 [0.58, 2.18]	_
Total (95% CI)		4342		3585	100.0%	0.89 [0.58, 1.36]	•
Total events	49		44				
Heterogeneity: Tau2 :	= 0.00; Ch	$ni^2 = 2.$	79, df =	3 (P =	0.43); 12 :	= 0%	201 201
Test for overall effect	Z = 0.55	5 (P = 0)	.58)			(0.01 0.1 1 10 100' Favours NOAC DAT Favours VKA TAT

MYOCARDIAL INFARCTION

	NOAC	DAT	VKA_	ГАТ		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
AUGUSTUS	38	1153	34	1154	29.3%	1.12 [0.71, 1.76]	-
ENTRUST AF-PCI	29	751	23	755	21.0%	1.27 [0.74, 2.17]	
PIONEER AF-PCI	19	694	21	695	16.2%	0.91 [0.49, 1.67]	
RE-DUAL PCI	70	1744	29	981	33.5%	1.36 [0.89, 2.08]	 -
Total (95% CI)		4342		3585	100.0%	1.18 [0.93, 1.52]	•
Total events	156		107				
Heterogeneity. Tau2 =	= 0.00; Ch	$ni^2 = 1.3$	25, df =	3 (P =	0.74); 12 =	0%	0.01 0.1 1 10 100
Test for overall effect	Z = 1.34	(P = 0	.18)				0.01 0.1 1 10 100 Favours NOAC DAT Favours VKA TAT

meta-analysis of the 4 trials

	ISTH	MA	JOE	RB	LEEL	DII	N
	ISTH	MA	LIOI	R	FFI	III	N

	NOAC_	DAT	VKA_	TAT		Risk Ratio	Risk Ratio	
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI	
AUGUSTUS	23	1143	62	1123	22.2%	0.36 [0.23, 0.58]		
ENTRUST AF-PCI	45	751	48	755	25.2%	0.94 [0.64, 1.40]	_	
PIONEER AF-PCI	27	696	48	697	22.6%	0.56 [0.36, 0.89]		
RE-DUAL PCI	92	1744	90	981	30.0%	0.57 [0.43, 0.76]	-	
Total (95% CI)		4334		3556	100.0%	0.59 [0.41, 0.83]	•	
Total events	187		248					
Heterogeneity: Tau2 =	= 0.09; Ch	ni2 = 9.5	52, df =	3 (P =	0.02); 12 :	= 68%	to a la l	100
Test for overall effect	Z = 2.99	P = 0	.003)				0.01 0.1 1 10 Favours NOAC_DAT Favours VKA_TAT	100

INTRACRANIAL HAEMORRHAGE

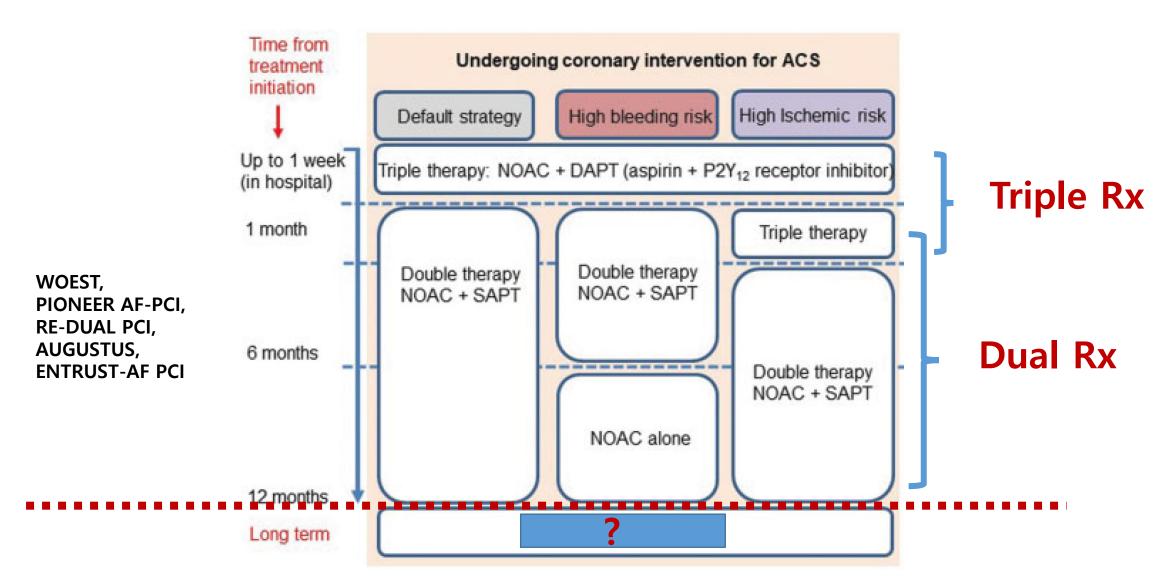
	NOAC_DAT \		NOAC_DAT VKA_TAT			Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
AUGUSTUS	1	1143	4	1123	9.3%	0.25 [0.03, 2.19]	
ENTRUST AF-PCI	4	751	9	755	32.5%	0.45 [0.14, 1.44]	
PIONEER AF-PCI	3	696	7	697	24.6%	0.43 [0.11, 1.65]	
RE-DUAL PCI	4	1744	10	981	33.5%	0.23 [0.07, 0.72]	
Total (95% CI)		4334		3556	100.0%	0.33 [0.17, 0.65]	•
Total events	12		30				
Heterogeneity: Tau2 =	0.00; Ch	$i^2 = 0.8$	39, df =	3 (P =	0.83); 12 =	= 0%	0.01 0.1 10 100
Test for overall effect:	Z = 3.22	(P = 0)	.001)				Favours NOAC_DAT Favours VKA_TAT

STENT THROMBOSIS

	NOAC_	DAT	VKA_7	ГАТ		Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
AUGUSTUS	21	1153	12	1154	40.0%	1.75 [0.87, 3.54]	
ENTRUST AF-PCI	8	751	6	755	17.9%	1.34 [0.47, 3.84]	
PIONEER AF-PCI	5	694	4	695	11.6%	1.25 [0.34, 4.64]	-
RE-DUAL PCI	22	1744	8	981	30.6%	1.55 [0.69, 3.46]	
Total (95% CI)		4342		3585	100.0%	1.55 [0.99, 2.41]	•
Total events	56		30				250
Heterogeneity: Tau2 =	0.00; Ch	$i^2 = 0.7$	29, df =	3 (P =	0.96); 12 :	= 0%	
Test for overall effect	Z = 1.92	(P = 0)	.06)				0.01 0.1 1 10 100 Favours NOAC_DAT Favours VKA_TAT

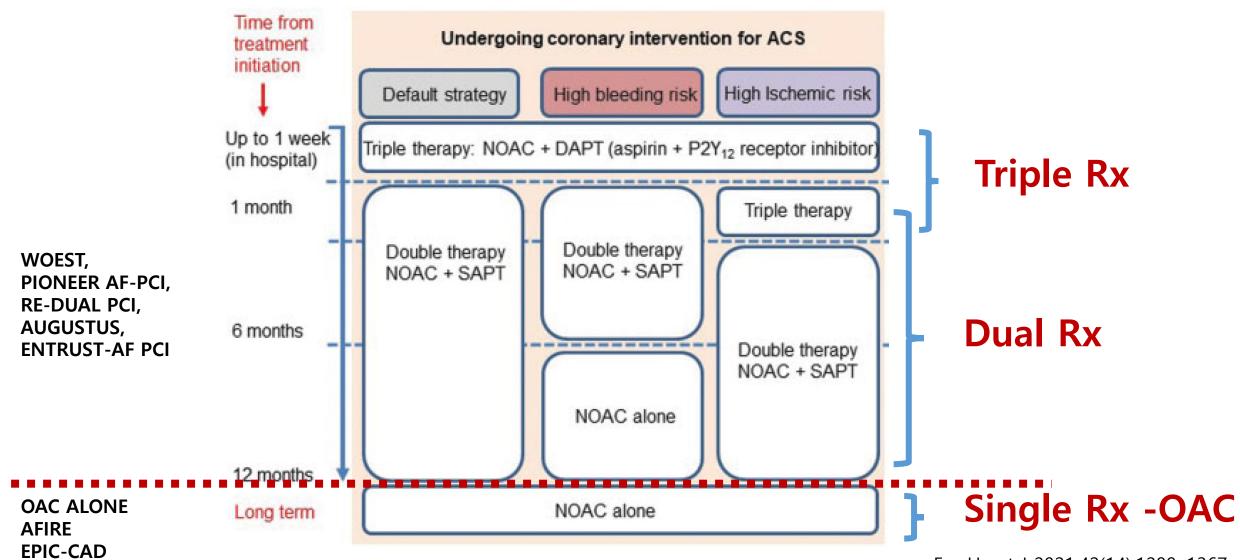


Management of patients requiring OAC undergoing PCI





Management of patients requiring OAC undergoing PCI



Eur Heart J 2021;42(14):1289–1367 Hamostaseologie2022;42:73–79

EPIC-CAD trial

the <u>Edoxaban versus Edoxaban with AntiPlatelet Agent in Patients with Atrial Fibrillation and Chronic Stable Coronary Artery Disease</u>

Aims:

To determine whether edoxaban monotherapy (vs. dual edoxaban+SAPT) can reduce the net adverse clinical events compared to combination therapy in AF patients with high thromboembolic risk and stable CAD

Design:

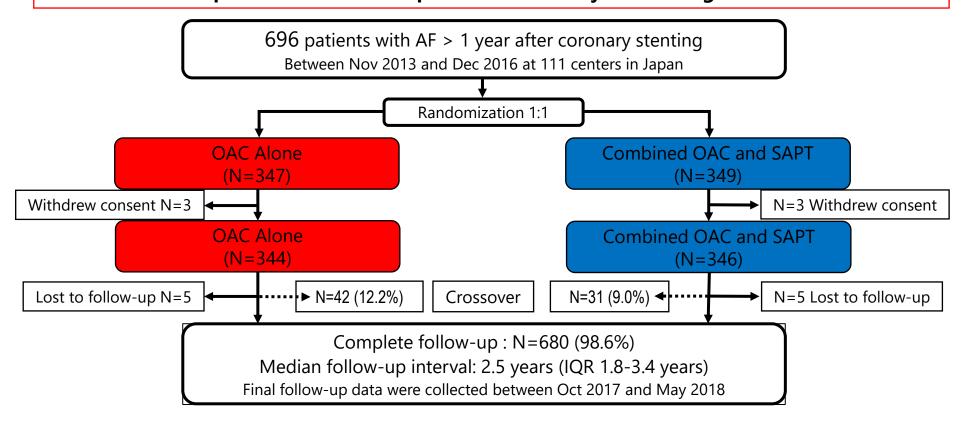
Multicenter, randomized, open-label, superiority trial



OAC-ALONE trial

(Optimizing Antithrombotic Care in Patients With AF and Coronary Stent)

Prospective, multicenter, open-label, noninferiority trial comparing OAC vs OAC+SAPT Prim. End=death, MI, stroke/SE (analyzed for non-inferiority)
Seonc. End=composite of Prim. End point or ISTH major bleeding



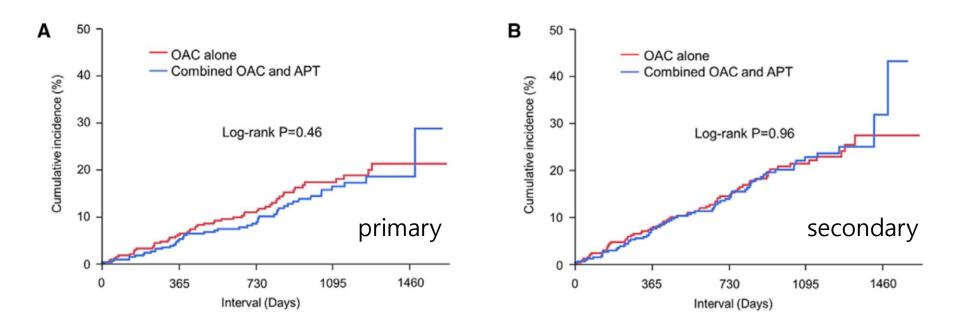
The enrollment was to slow and the study was prematurely terminated before reaching the target population, and the results are inconclusive.



OAC-ALONE Study

Optimizing Antithrombotic Care in pts with AF and PCI

Prospective, multicenter, open-label, noninferiority trial comparing OAC vs OAC+SAPT Prim. End=death, MI, stroke/SE Seonc.End=composite of Prim or ISTH major bleeding





CONCLUSIONS: This randomized trial did not establish noninferiority of OAC alone to combined OAC+APT in pts with AF and stable CAD beyond 1 yr after stenting. Because patient enrollment was prematurely terminated, the study was underpowered and inconclusive.

AFIRE trial

(Atrial Fibrillation and Ischemic Events with Rivaroxaban in Patients with Stable CAD)

Prospective, multicenter, open-label, trial comparing rivaroxaban vs rivarox+SAPT Prim. Efficacy End Point=any death, MI, stroke/SE (non-inferiority) Prim. Safety End Poin=ISTH major bleeding (superiority)

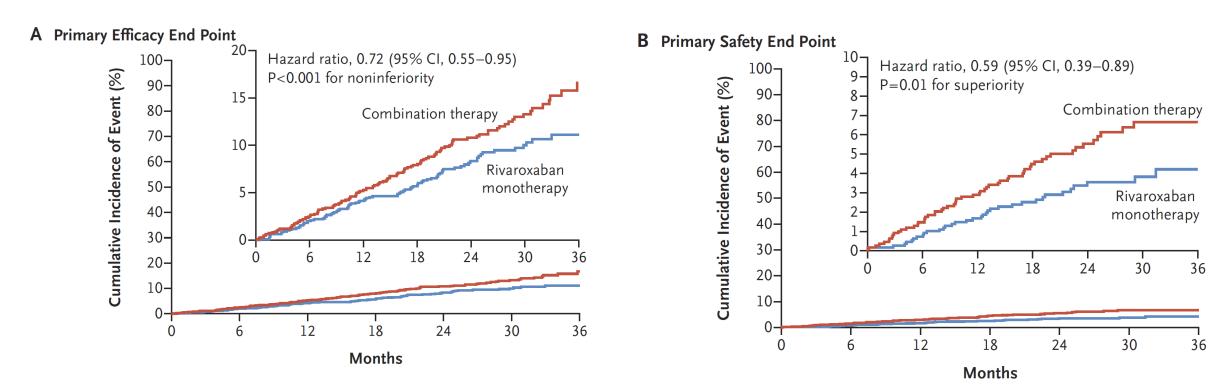
Patients with AF + PCI or CABG > 1yr earlier Patients with angiographically confirmed CAD (not requiring revascularization)

- -monotherapy with rivaroxaban
- -combination therapy with rivaroxaban+single APT



Antithrombotic Therapy for AF with Stable CAD

AFIRE (AF and Ischemic Events with Rivaroxaban in Patients with Stable CAD) trial



CONCLUSIONS

As antithrombotic therapy, rivaroxaban monotherapy was noninferior to combination therapy for efficacy and superior for safety in patients with AF and stable CAD.



Limitations of OAC alone, AFIRE trials

OAC Alone

- 1. used warfarin (75%) as OAC (DOAC<25%)
- 2. prematurely terminated and the results, inconclusive

AFIRE

NOAC (Rivaroxaban), but low dose 15/10mg

EPIC-CAD, first to use "standard dose", "NOAC" in pts w AF+stable CAD



Summary: AF and CAD

- 1. AF complicating ACS or PCI (class I, LOE A)
 Early discontinuation of aspirin (1-4 wk)
 TT to DT (OAC w P2Y12)
- 2. AF with chronic CAD (>1yr after PCI) (class I, LOE B-R)
 OAC monotherapy, recommended over OAC+SAPT
 cf. history of stent thrombosis
- 3. EPIC-CAD: second RCT for chronic stable CAD pts.
 - first to use standard dose NOAC
 - the results will provide solid scientific evidence for antithrombotic Tx in AF patients w stable CAD

Expectations on the EPIC-CAD trial after the AFIRE

1. OAC alone(Warf), AFIRE (NOAC, low dose),

EPIC (first to use standard NOAC)

- 2. OAC monoRx standard Tx in pts with AF and stable CAD
- 3. Awareness on AF

...many interv. cardiologists regard AF as a normal variant.

adherence to antiplatelet - many of them still prefer DAPT to NOAC.

low prescription rate of OAC among interv. cardiologists



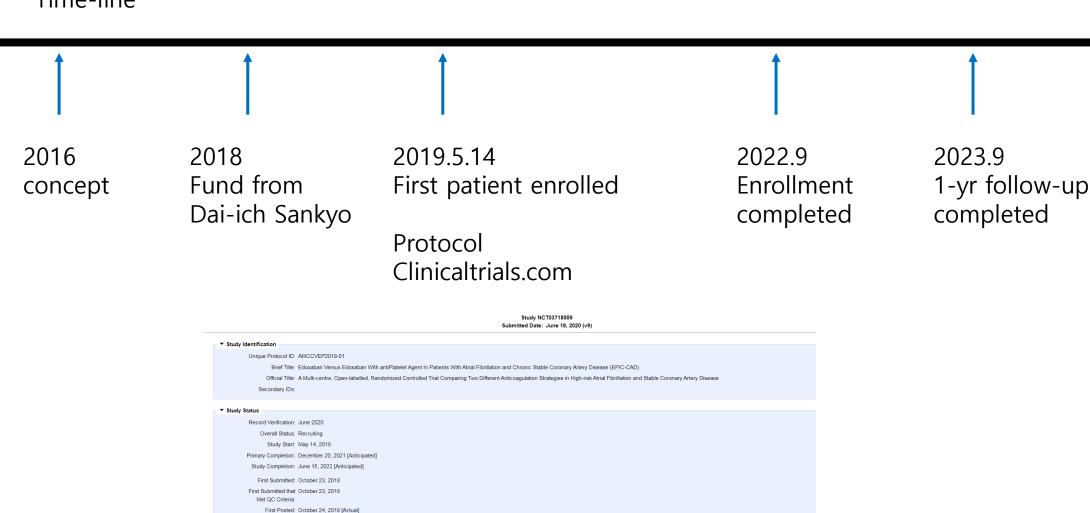
EPIC-CAD trial

Last Update Submitted that June 18, 2020

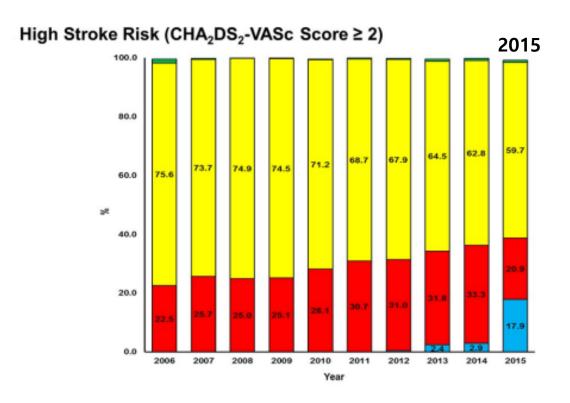
Last Update Posted: June 18, 2020 [Actual]

Korean, multicenter, randominzed clinical trials 1040 pts from 20 sites Edoxaban vs edoxaban+single APT

Time-line



Under-utilization of OAC in real practice



The utilization of TAT following PCI among high-stroke risk AF patients steadily increased from 30.3% in 2011 to 65.4% in 2020. However, in 2020, a significant proportion of 29.4% of patients still received DAPT, indicating that many AF patients undergoing PCI did not receive adequate antithrombotic therapy. - the Health Insurance Review & Assessment Service (HIRA-NIS)

