

SUPPLEMENTARY FILES:

**Supplementary Table S1**

**Definitions of etiology of syncope**

<b>Syncope Diagnosis<sup>[1]</sup></b>	<b>Definition</b>	
<b><i>Vasovagal Syncope</i></b>	<b>Certain</b>	Precipitated by emotional distress or orthostatic stress and associated with typical prodrome
	<b>Highly Probable</b>	Associated with typical prodrome but without clear trigger, or associated with typical trigger with minimal prodrome  Or  ECG recording in the ICM suggestive of reflex origin (Type 1A, 1B,2 of the ISSUE classification)
<b><i>Carotid sinus hypersensitivity</i></b>	<b>Certain</b>	Syncope is reproduced in the presence of asystole > 3 seg and/or fall in systolic BP>50 mmHg during CSM
	<b>Highly Probable</b>	presence of asystole > 3 seg and/or fall in systolic BP > 50 mmHg during CSM without reproducing the syncope
<b><i>Orthostatic Syncope</i></b>	<b>Certain</b>	Occurs after standing up and there is documentation of symptomatic orthostatic hypotension (OH) in active standing test
	<b>Highly Probable</b>	Occurs after standing up and there is documentation of asymptomatic OH in active standing test.  Or  Occurs after standing and the ECG recording in the ICM is compatible with OH response (Type 3 or Type 4A of ISSUE classification)
<b><i>Arrhythmic Syncope</i></b>	<b>Certain</b>	Clear correlation between arrhythmic event and syncope, or diagnostic findings in the EPS: HV interval $\geq$ 70 msec or $\geq$ 100 msec after class I drug challenge, Advanced AV block, induction of VT or SVT that reproduces the symptoms.
	<b>Highly Probable</b>	Documentation of asymptomatic advanced AV block, asystole > 3 secs (except asleep), SVT or VT. SNRTc > 525 ms in the EPS+ documented sinus pauses on ECG monitoring.
<b><i>Advanced AVB / Severe conduction disturbances</i></b>	<b>Certain</b>	Correlation between type II 2 <sup>nd</sup> degree, 3d degree or high-grade AVB event and

		syncope, or diagnostic findings in the EPS: HV interval $\geq 70$ msec or $\geq 100$ msec after class I drug challenge, intra-Hisian or infra-Hisian block
	<b>Highly Probable</b>	Documentation of asymptomatic . type II 2 <sup>nd</sup> degree, 3d degree or high-grade AVB
<b>Sinus node disfunction</b>	<b>Certain</b>	Clear correlation between sinus pause and syncope.
	<b>Highly Probable</b>	SNRTc > 525 ms in the EPS+ documented sinus pauses on ECG monitoring. Asystole > 3 secs (except asleep).
<b>Acute coronary syndrome</b>	<b>Highly Probable</b>	Occurs during the acute phase of an ACS, with typical chest pain, acute ischemic ECG changes and/or troponin rise.
<b>Exercise Low Cardiac Output</b>	<b>Highly Probable</b>	Occurs during intense exercise such as fast walking, running or dancing in presence of a ventricular outflow obstruction (like aortic stenosis), without criteria for previous diagnosis

CSM: carotid sinus massage / BP: blood pressure / OH: orthostatic hypotension / EPS: Electrophysiology study / AV: atrio-ventricular / VT: ventricular tachycardia / SVT: Supraventricular tachycardia / SNRTc: corrected sinus node recovery time / ACS: acute coronary syndrome

**TABLE S2 –Logistic regression model to assess the association between sex and aAVB/sCD.**

	<b>Factor</b>	<b>OR</b>	<b>OR 95% CI</b>	<b>p value</b>
<i>Unadjusted</i>				
	<b>Women</b>	<b>0.66</b>	<b>0.45-0.98</b>	<b>0.038</b>
<i>Adjusted</i>				
	<b>Women</b>	<b>0.44</b>	<b>0.26-0.74</b>	<b>0.002</b>
	Age>75 y.o	1.13	0.70-1.84	0.618
	Hypertension	1.07	0.59-1.92	0.834
	Diabetes	0.94	0.57-1.55	0.805
	IHD	1.20	0.68-2.13	0.553
	LVEF<45%	0.79	0.40-1.57	0.498
	Atrial Fibrillation	1.03	0.48-2.22	0.942
	Recurrent syncope	1.21	0.75-1.94	0.430
	LBBB	2.80	1.21-6.47	0.016
	Isolated RBBB	0.29	0.09-0.89	0.030
	RBBB and LAFB	0.89	0.41-1.93	0.773
	Long PR interval	2.52	1.48-4.27	0.001

CI: confidence interval; OR: odds ratio; y.o: years old. IHD: Ischemic heart disease. LVEF: Left ventricular ejection fraction; LBBB: Left bundle branch block; RBBB: Right bundle branch block; LAFB: Left anterior fascicular block.

**TABLE S3** Type of cardiac device implanted to treat the syncope

Type of device	TOTAL	MEN	WOMEN
	(n=252)	(n=167)	(n=85)
VVI pacemaker, <i>n</i> %	82 (32.5)	51 (30.5)	31 (36.5)
DDD pacemaker, <i>n</i> %	155 (61.2)	103 (61.7)	52 (61.2)
CRT-pacemaker, <i>n</i> %	7 (2.8)	7 (4.2)	0 (0)
Single chamber ICD, <i>n</i> %	2 (0.8)	2 (1.2)	0 (0)
Dual chamber ICD, <i>n</i> %	2 (0.8)	2 (1.2)	0 (0)
CRT-ICD, <i>n</i> %	4 (2.4)	2 (1.2)	2 (2.4)

*CRT: Cardiac resynchronization therapy. ICD: Implantable cardiac defibrillator*

**TABLE S4 – Mechanism of syncope recurrence after the diagnosis and appropriate treatment.**

Mechanism	TOTAL	MEN	WOMEN
	(n=30)	(n=19)	(n=11)
<i>Orthostatic</i>	16 (53.3)	9 (47.4)	7 (63.6)
<i>Reflex</i>	2 (6.7)	2 (10.5)	0 (0)
<i>aAVB/sCD</i>	2 (6.7)	2 (10.5)	0 (0)
<i>Low cardiac output</i>	1 (3.3)	0 (0)	1 (9.1)
<i>VT</i>	2 (6.7)	2 (10.5)	0 (0)
<i>Fast SVT/AF</i>	2 (6.7)	1 (5.3)	1 (9.1)
<i>SND</i>	0	0	0
<i>CSH</i>	0	0	0
<i>Pacemaker dysfunction</i>	2 (6.7)	1 (5.3)	1 (9.1)
<i>Other</i>	1 (3.3)	1 (5.3)	0 (0)
<i>Unknown, n %</i>	2 (6.7)	1 (5.3)	1 (9.1)

*aAVB/sCD: advanced atrio-ventricular block or severe conduction disturbances; VT: Ventricular Tachycardia; SND: Sinus node dysfunction. SVT: Supraventricular tachycardia. AF: Atrial tachycardia. CSH: Carotid sinus hypersensitivity*