



Amicale des
Cardiologues de
la Côte d'Azur



Prise en charge de la syncope

Nouvelles recommandations

JC Deharo, Marseille



Assistance Publique
Hôpitaux de Marseille



Aix-Marseille
université

2018 ESC Guidelines for the diagnosis and management of syncope

2018 ESC Guidelines on Syncope – Michele Brignole & Angel Moya
EHJ Doi:10.1093/eurheartj/ehy037



2018 ESC Guidelines for the diagnosis and management of syncope

The Task Force for the diagnosis and management of syncope of the European Society of Cardiology (ESC).

Developed with a special contribution of European Heart Rhythm Association (EHRA).

Endorsed by the following societies:

European Society of Emergency Medicine (EuSEM).

European Federation of Internal Medicine (EFIM).

European Union Geriatric Medicine Society (EUGMS).

European Neurological Society (ENS).

European Federation of Autonomic Societies (EFAS).

Authors/Task Force Members: Michele Brignole (Chairperson) (Italy); Angel Moya (Co-chairperson) (Spain); Jean-Claude Deharo (France); Frederik de Lange (The Netherlands); Perry Elliott, (UK); Artur Fedorowski (Sweden); Alessandra Fanciulli (Austria); Raffaello Furlan (Italy); Rose Anne Kenny (Ireland); Alfonso Martin (Spain); Vincent Probst (France); Matthew Reed (UK); Ciara Rice (Ireland); Richard Sutton (Monaco); Andrea Ungar (Italy); Gert van Dijk (the Netherlands).

Recommendations

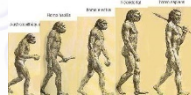
Total 113

Classes of recommendations	
Class I	46 (41%)
Class IIa	42 (37%)
Class IIb	21 (19%)
Class III	4 (4%)

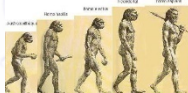
Levels of evidence	
Evidence A	6 (5%)
Evidence B	50 (44%)
Evidence C	57 (50%)

NEW / REVISED CLINICAL SETTINGS AND TESTS:

- Tilt testing: concepts of *hypotensive susceptibility*
- Increased role of prolonged ECG monitoring
- Video recording in suspected syncope
- “Syncope without prodrome, normal ECG and normal heart” (adenosine sensitive syncope)
- Neurological causes: “ictal asystole”



2018 NEW/REVISED CONCEPTS in management of syncope



NEW / REVISED INDICATIONS FOR TREATMENT:

- *Reflex syncope*: algorithms for selection of appropriate therapy based on age, severity of syncope and clinical forms
- *Reflex syncope*: algorithms for selection of best candidates for pacemaker therapy
- *Patients at risk of SCD*: definition of unexplained syncope and indication for ICD
- *Implantable loop recorder* as alternative to ICD, in selected cases

(OUT-PATIENT) SYNCOPE MANAGEMENT UNIT:

- Structure: staff, equipment, and procedures
- Tests and assessments
- Access and referrals
- Role of the Clinical Nurse Specialist
- Outcome and quality indicators

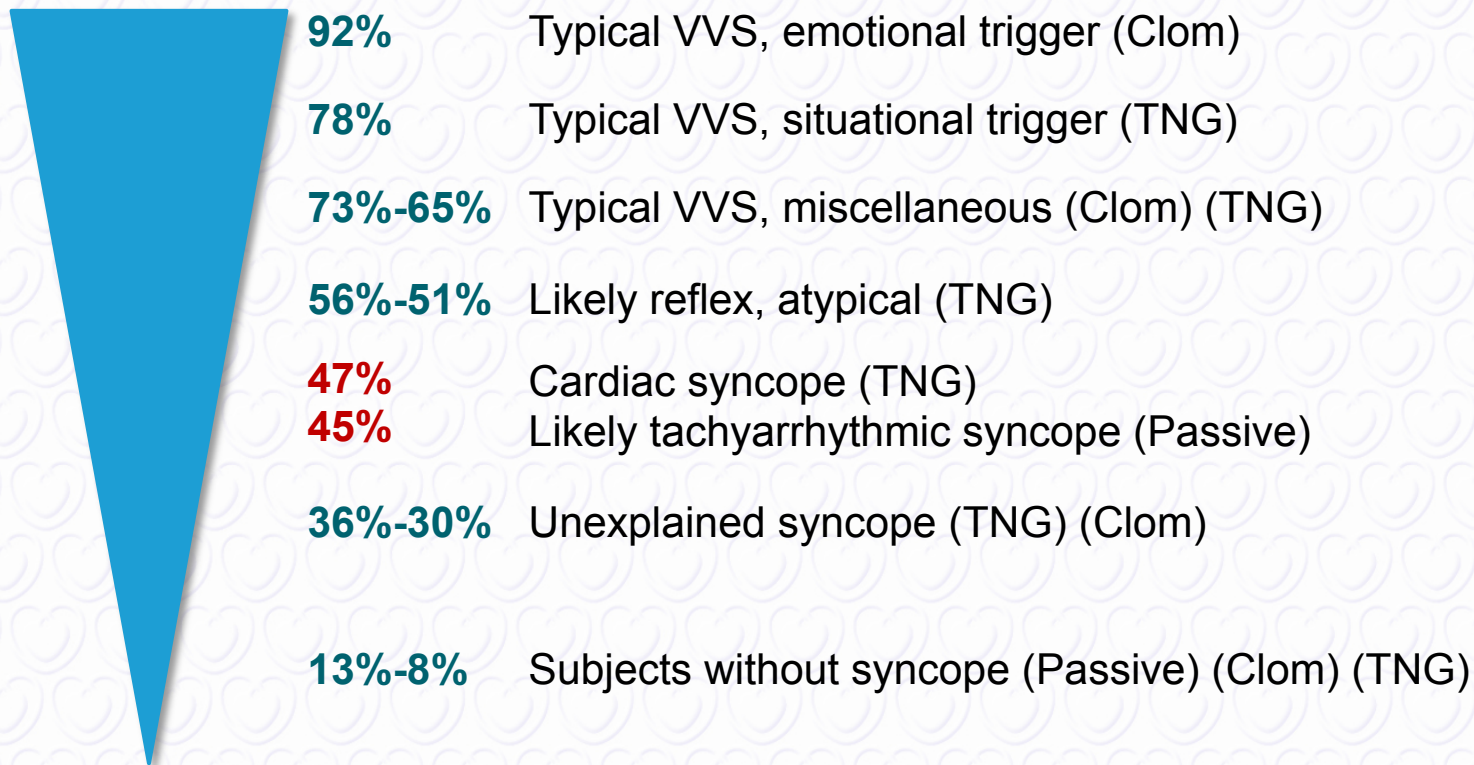
MANAGEMENT IN EMERGENCY DEPARTMENT:

- List of low-risk and high-risk features
- Risk stratification flowchart
- Management in *ED Observation Unit* and/or fast-track to *Syncope Unit*
- Restricted admission criteria
- Limited usefulness of risk stratification scores

What is new in 2018 syncope guidelines ? (1)

2009	CHANGE IN RECOMMENDATIONS	2018
	Contraindications to CSM	
	Tilt testing: indication for syncope	
	Tilt testing for educational purposes	
	Tilt testing: diagnostic criteria	
	Tilt testing for assessing therapy	
	Holter for unexplained syncope	
	ECG Monitoring: presyncope & asymptomatic arrhythmias	
	Adenosine triphosphate test	
	EPS-guided pacemaker: prolonged SNRT	

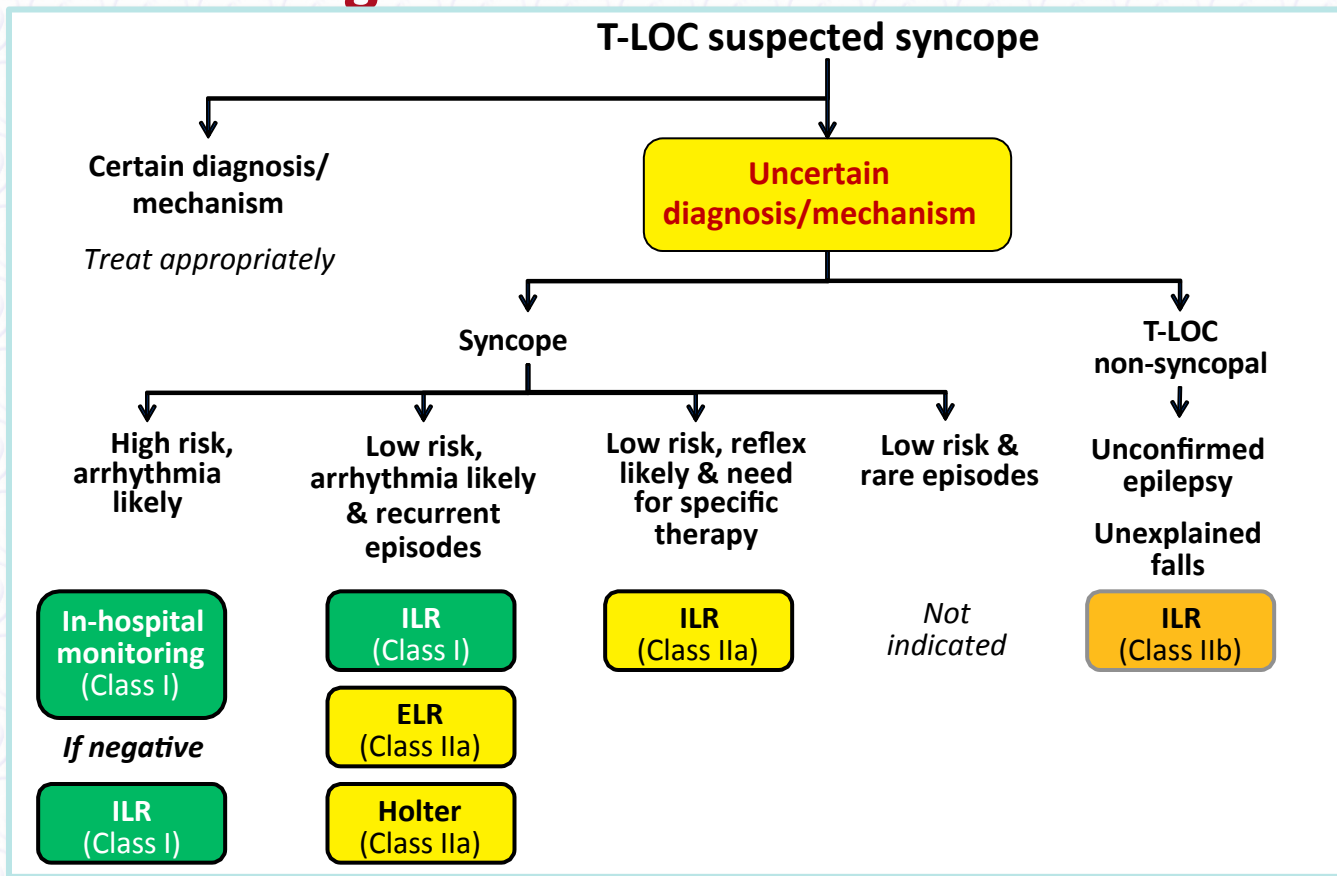
Tilt testing: **positivity rate**



Tilt testing

Recommendations	Class	Level
Indications		
1. Tilt testing should be considered in patients with suspected reflex syncope, OH, POTS, or PPS.	Ila	B
2. Tilt testing may be considered to educate patients to recognize symptoms and learn physical manoeuvres.	IIb	B
Diagnostic criteria		
3. Reflex syncope, OH, POTS, or PPS should be considered likely if tilt testing reproduces symptoms along with the characteristic circulatory pattern of these conditions.	Ila	B

ECG monitoring: indications



Recommendations	Class	Level
Left ventricular systolic dysfunction		
1. ICD therapy is recommended to reduce SCD in patients with symptomatic heart failure (NYHA class II–III) and LVEF <35% after ≥3 months of optimal medical treatment for at least 1 year	I	A

Recommendations	Class	Level
Hypertrophic cardiomyopathy		
2. An ICD should be considered in patients with symptomatic left ventricular systolic impairment and a current or previous episode of syncope or sustained ventricular tachycardia	I	A

2. An ICD should be considered in patients with symptomatic left ventricular systolic impairment and a current or previous episode of syncope or sustained ventricular tachycardia	1. It is recommended that patients with unexplained syncope and a current or previous episode of syncope or sustained ventricular tachycardia should be considered for ICD implantation	Recommendations	Class	Level
3. Instead of an ICD, an ILR may be considered in patients with recurrent episodes of unexplained syncope or sustained ventricular tachycardia but without a current indication for ICD implantation	2. Instead of an ICD, an ILR may be considered in patients with recurrent episodes of unexplained syncope or sustained ventricular tachycardia but without a current indication for ICD implantation	Long QT syndrome		
		1. ICD implantation in addition to beta-blockers should be considered in LQTS patients who experience unexplained syncope while receiving an adequate dose of beta-blockers	Ia	B

3. Instead of an ICD, an ILR may be considered in patients with recurrent episodes of unexplained syncope or sustained ventricular tachycardia but without a current indication for ICD implantation	2. Left cardiac symptoms in symptomatic LQTS patients (a) beta-blockers are contraindicated (b) ICD therapy is recommended (c) when possible, avoid drugs that prolong the QT interval	Recommendations	Class	Level
Arrhythmogenic right ventricular dysplasia		Brugada syndrome		
Unexplained syncope with a diagnostic criterion defined in this section, unexplained syncope is considered a risk factor for ventricular tachyarrhythmias.	3. ICD implantation should be considered in patients with a spontaneous diagnostic type I ECG pattern and a history of unexplained syncope.		Ia	B
	4. Instead of an ICD, an ILR may be considered in patients with recurrent episodes of unexplained syncope or sustained ventricular tachycardia but without a current indication for ICD implantation	4. Instead of an ICD, an ILR may be considered in patients with recurrent episodes of unexplained syncope with systolic impairment but without a current indication for ICD.	Ia	C

Unexplained syncope is defined as syncope that does not meet a Class I diagnostic criterion defined in the tables of recommendations. In the presence of clinical features described in this section, unexplained syncope is considered a risk factor for ventricular tachyarrhythmias.

NEW / REVISED CLINICAL SETTINGS AND TESTS:

- Tilt testing: concepts of *hypotensive susceptibility*
- Increased role of prolonged ECG monitoring
- Video recording in suspected syncope
- “Syncope without prodrome, normal ECG and normal heart” (adenosine sensitive syncope)
- Neurological causes: “ictal asystole”



2018 NEW/REVISED CONCEPTS in management of syncope



NEW / REVISED INDICATIONS FOR TREATMENT:

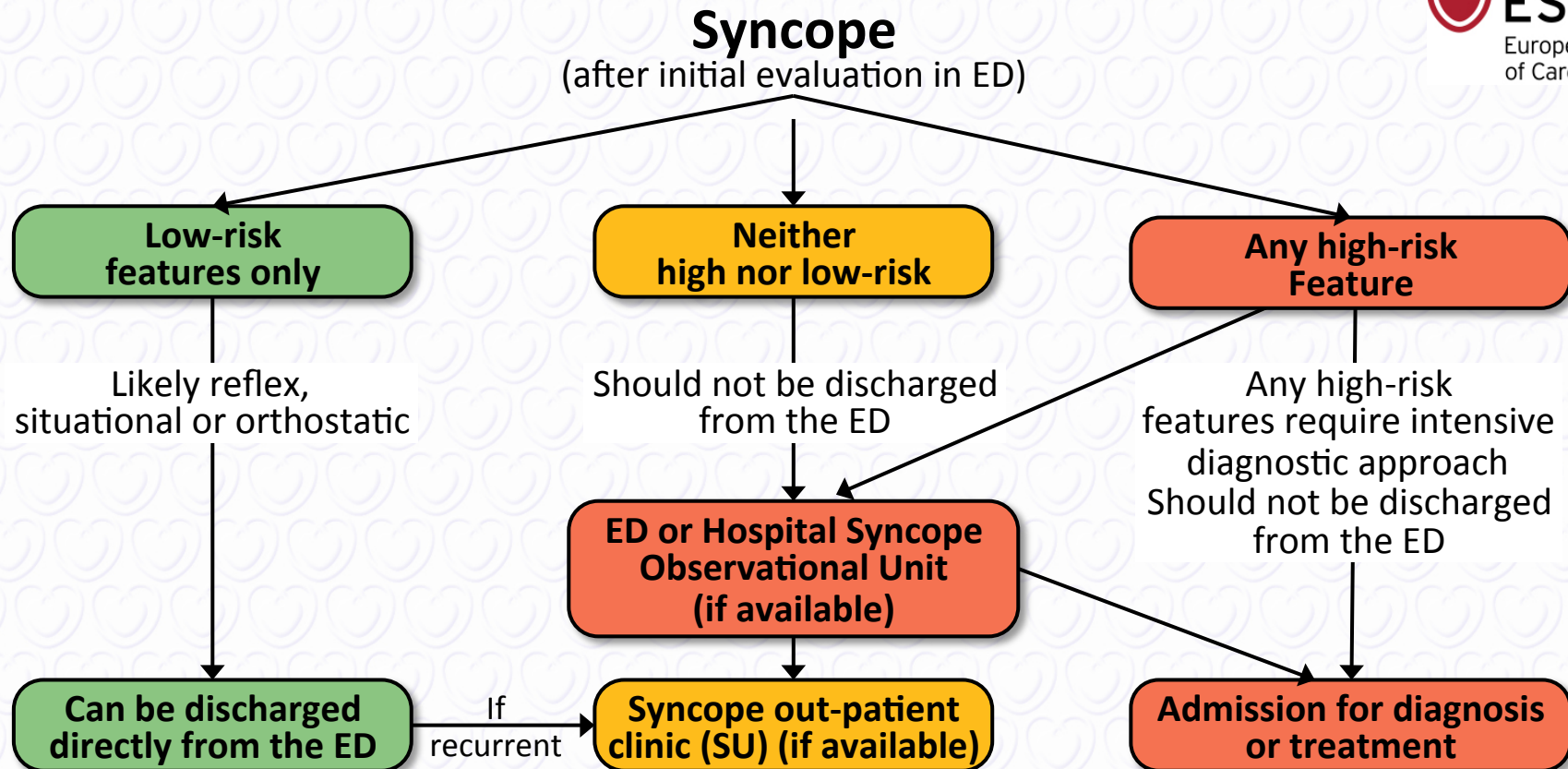
- *Reflex syncope*: algorithms for selection of appropriate therapy based on age, severity of syncope and clinical forms
- *Reflex syncope*: algorithms for selection of best candidates for pacemaker therapy
- *Patients at risk of SCD*: definition of unexplained syncope and indication for ICD
- *Implantable loop recorder* as alternative to ICD, in selected cases

(OUT-PATIENT) SYNCOPE MANAGEMENT UNIT:

- Structure: staff, equipment, and procedures
- Tests and assessments
- Access and referrals
- Role of the Clinical Nurse Specialist
- Outcome and quality indicators

MANAGEMENT IN EMERGENCY DEPARTMENT:

- List of low-risk and high-risk features
- Risk stratification flowchart
- Management in *ED Observation Unit* and/or fast-track to *Syncope Unit*
- Restricted admission criteria
- Limited usefulness of risk stratification scores



Management of syncope in the ED

Recommendations	Class	Level
1. It is recommended that patients with low-risk features, likely to have reflex or situational syncope or syncope due to OH, are discharged from ED.	I	B
2. It is recommended that patients with high-risk features receive an early intensive prompt evaluation in a <u>syncope unit</u> or in an <u>ED observation unit</u> (if available), or are hospitalized.	I	B
3. It is recommended that patients who have neither high- nor low-risk features are <u>observed in the ED or in a syncope unit</u> instead of being hospitalized.	I	B
4. Risk stratification scores may be considered for risk stratification in the ED.	IIb	B

Organizational aspects: Syncope Unit

Key components

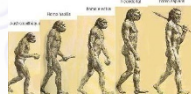
- The syncope unit should take the lead in service delivery for syncope, and in education and training of healthcare professionals who encounter syncope.
- The syncope unit should be led by a clinician with specific knowledge of TLOC and additional necessary team members (i.e. clinical nurse specialist) depending on the local model of service delivery.
- The syncope unit should provide minimum core treatments for reflex syncope and OH, and treatments or preferential access for cardiac syncope, falls, psychogenic pseudosyncope, and epilepsy.
- Referrals should be directly from family practitioners, EDs, in-hospital and out-hospital services, or self-referral depending on the risk stratification of referrals. Fast-track access, with a separate waiting list and scheduled follow-up visits, should be recommended.
- Syncope units should employ quality indicators, process indicators, and desirable outcome targets.

Organizational aspects: Role of physician and staff in a SU

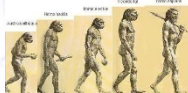
<i>Procedure or test</i>	SU Physician	SU Staff	Non-SU personnel
History taking	x		
Structured history taking (e.g., application of software technologies)		x	
12-lead ECG		x	
Blood tests		x	
Echocardiogram and imaging			x
Carotid sinus massage	x		
Active standing test		x	
Tilt table test	(x)	x	
Basic autonomic function test		x	
ECG monitoring (Holter, ELR): administration and interpretation	x	x	
Implantable loop recorder	x	(x)	
Remote monitoring		x	
Others: stress test, electrophysiological study, angiograms			x
Neurological tests (CT, MRI, EEG, video-EEG)			x
Pacemaker and ICD implantation, catheter ablation			x
Patient's education, biofeedback training. and instructions	x	x	
Final report and clinic note	x		
Communication with patients, referring physicians	x	x	
Follow-up	x	x	

NEW / REVISED CLINICAL SETTINGS AND TESTS:

- Tilt testing: concepts of *hypotensive susceptibility*
- Increased role of prolonged ECG monitoring
- Video recording in suspected syncope
- “Syncope without prodrome, normal ECG and normal heart” (adenosine sensitive syncope)
- Neurological causes: “ictal asystole”



2018 NEW/REVISED CONCEPTS in management of syncope



NEW / REVISED INDICATIONS FOR TREATMENT:

- *Reflex syncope*: algorithms for selection of appropriate therapy based on age, severity of syncope and clinical forms
- *Reflex syncope*: algorithms for selection of best candidates for pacemaker therapy
- *Patients at risk of SCD*: definition of unexplained syncope and indication for ICD
- *Implantable loop recorder* as alternative to ICD, in selected cases

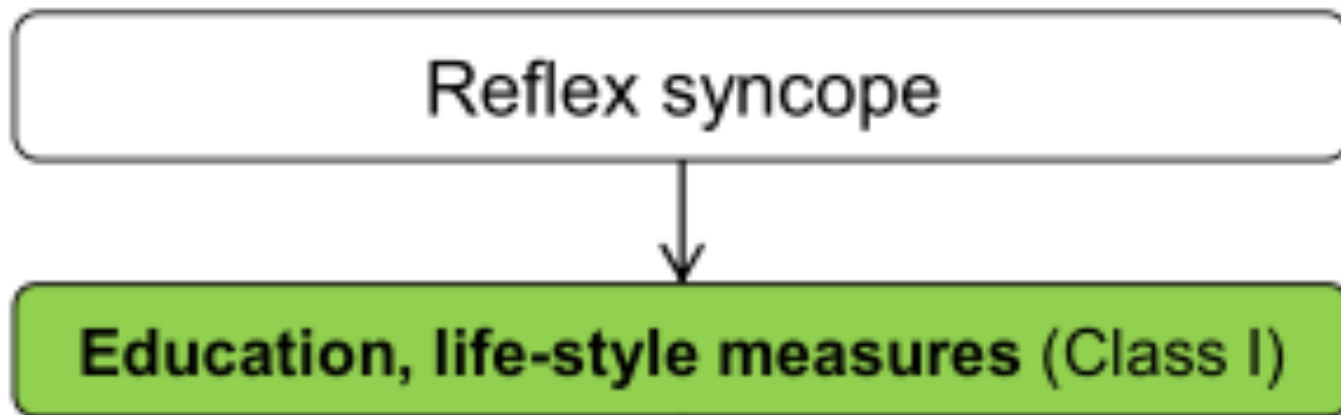
(OUT-PATIENT) SYNCOPE MANAGEMENT UNIT:

- Structure: staff, equipment, and procedures
- Tests and assessments
- Access and referrals
- Role of the Clinical Nurse Specialist
- Outcome and quality indicators

MANAGEMENT IN EMERGENCY DEPARTMENT:

- List of low-risk and high-risk features
- Risk stratification flowchart
- Management in *ED Observation Unit* and/or fast-track to *Syncope Unit*
- Restricted admission criteria
- Limited usefulness of risk stratification scores

Treatment of Reflex syncope



Treatment of syncope: General principles

Recurrence of syncope in untreated patients in RCT

Reference	Aetiology	Syncopes before evaluation	Syncopes after evaluation (%)
VPS I	VVS -Tilt +	6 (3–40) last 1 year	70% at 1 year
PC-Trial	VVS	3 (2–5) last 2 years	51% at 14 months
VASIS-Etilefrine	VVS -Tilt		24% at 1 year
POST	VVS - Tilt		35% at 1 year
Madrid <i>et al</i>	VVS - Tilt		46% at 1 year
VPS II	VVS - Tilt		40% at 6 months
SYNPACE	VVS - Tilt		44% at 1 year
VASIS	Reflex		50% at 2 years
SPAIN	Reflex –		46% at 2 years
ISSUE 3	Reflex	5 (3–6) last 2 years	57% at 2 years
ATP Study	Unexplained – ATP +	Na	69% at 2 years
PRESS	Cardiac – BBB	1 last 6 months	14% at 2 years
THEOPACE	Sick sinus syndrome	3.2 ± 4.3	30% at 4 years

**« No treatment »
recurrence rate
- 50% at 1-2 years**

Explain, reassure, educate

What is reflex syncope?

Reflex syncope is the commonest cause of syncope and is due to a temporary, intermittent dysfunction of part of the nervous system, called the autonomic nervous system. The autonomic nervous system controls the heart rate and blood pressure, and can be prone to episodes of over- or under-activity, leading to a slowing of the heart rate or a fall in the blood pressure. Being upright, food, heat, exercise, sight of blood, and emotional stress can sometimes bring on episodes. Patients commonly experience these symptoms for several minutes before losing consciousness and tend to recover fairly quickly afterwards (whereas after an epileptic seizure the person may be quite confused and sleepy for some time). During reflex syncope, the person can also experience some short-lived shaking (similar to that seen in a seizure), as well as incontinence.

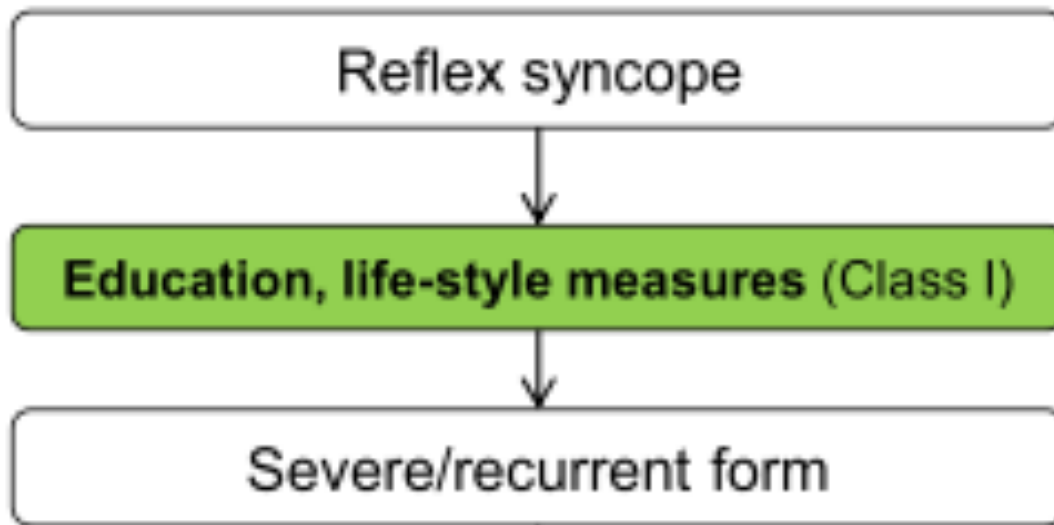
Web addenda

ESC information sheet for patients affected by reflex syncope (1)

Actions to take to avoid an impending attack of reflex syncope

- When you feel symptoms of syncope coming on, the best response is to lie down. If this is not possible, then sit down and do counter manoeuvres. The final warning symptom is when everything goes dark and you lose vision: then you *only have seconds in which to prevent syncope*.
- Your doctor will have shown you how to do the counter manoeuvres. They all concern tensing large muscles in the body. One way is to press the buttocks together and straighten the knees forcefully; another is to cross your legs and press them together over their entire length. Others make fists and tense the arm muscles.
- Drink around 2 litres of fluid a day and do not use salt sparingly (unless there are medical reasons not to!). A simple way to tell your fluid intake is high enough is to *check the colour of your urine*: if it is dark yellow there is little fluid in your body, so try to keep it very lightly coloured.
- Inform those in your immediate surroundings what to do during a spell: in typical spells there is *no need to call a doctor or an ambulance*. Of course, if you hurt yourself in the fall, this may change.

Treatment of Reflex syncope

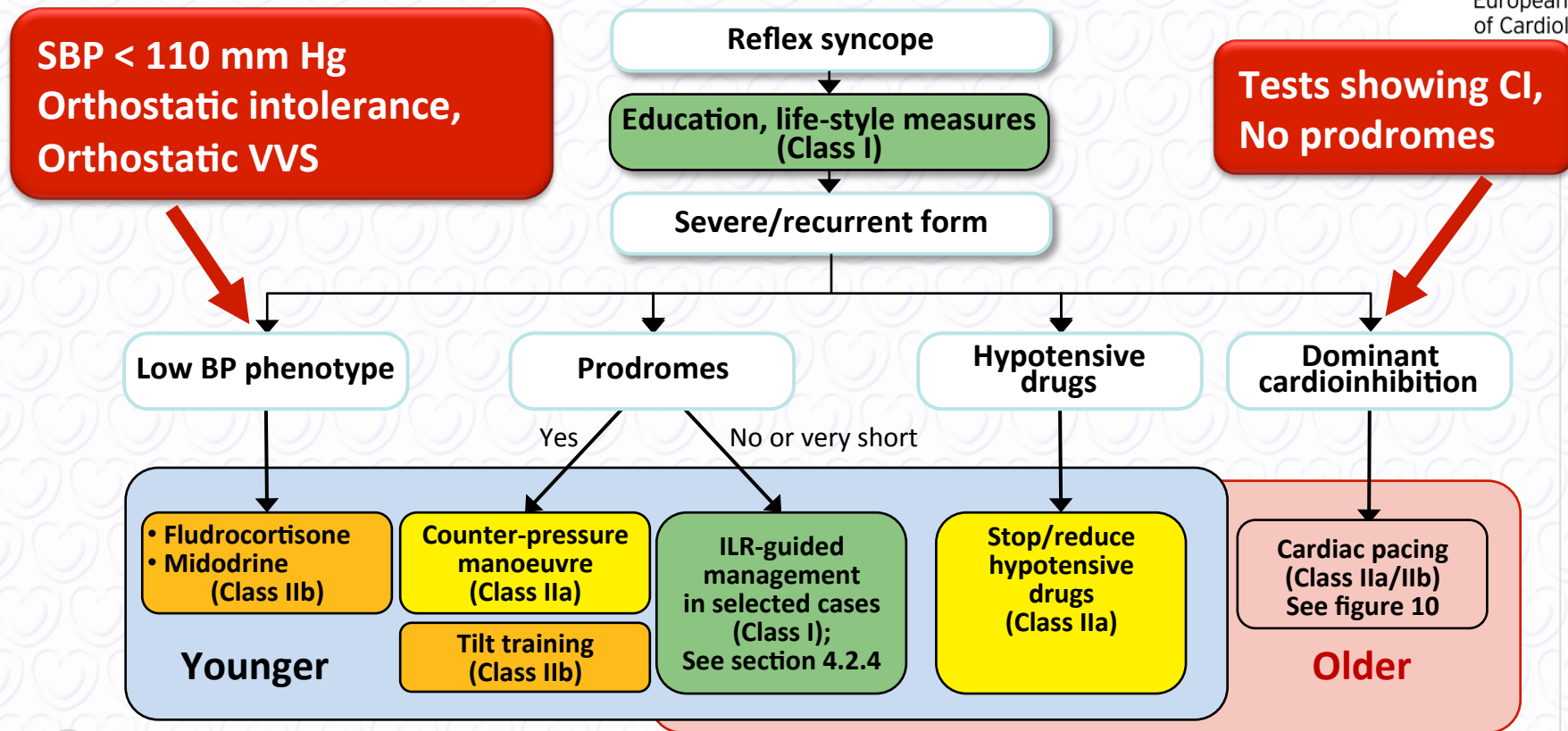


- Frequent
- Recurrent

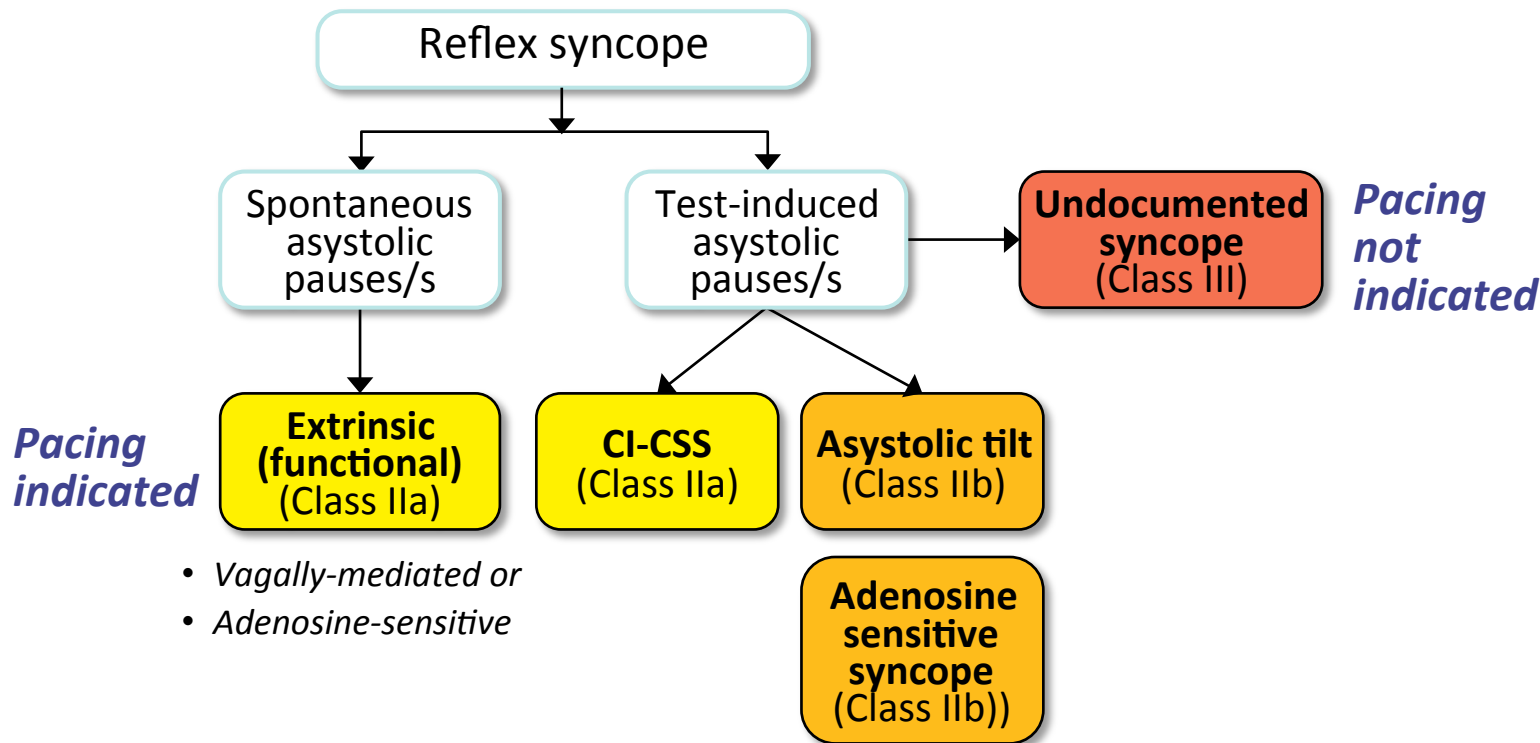
- No/Short prodromes
- High risk activities

21

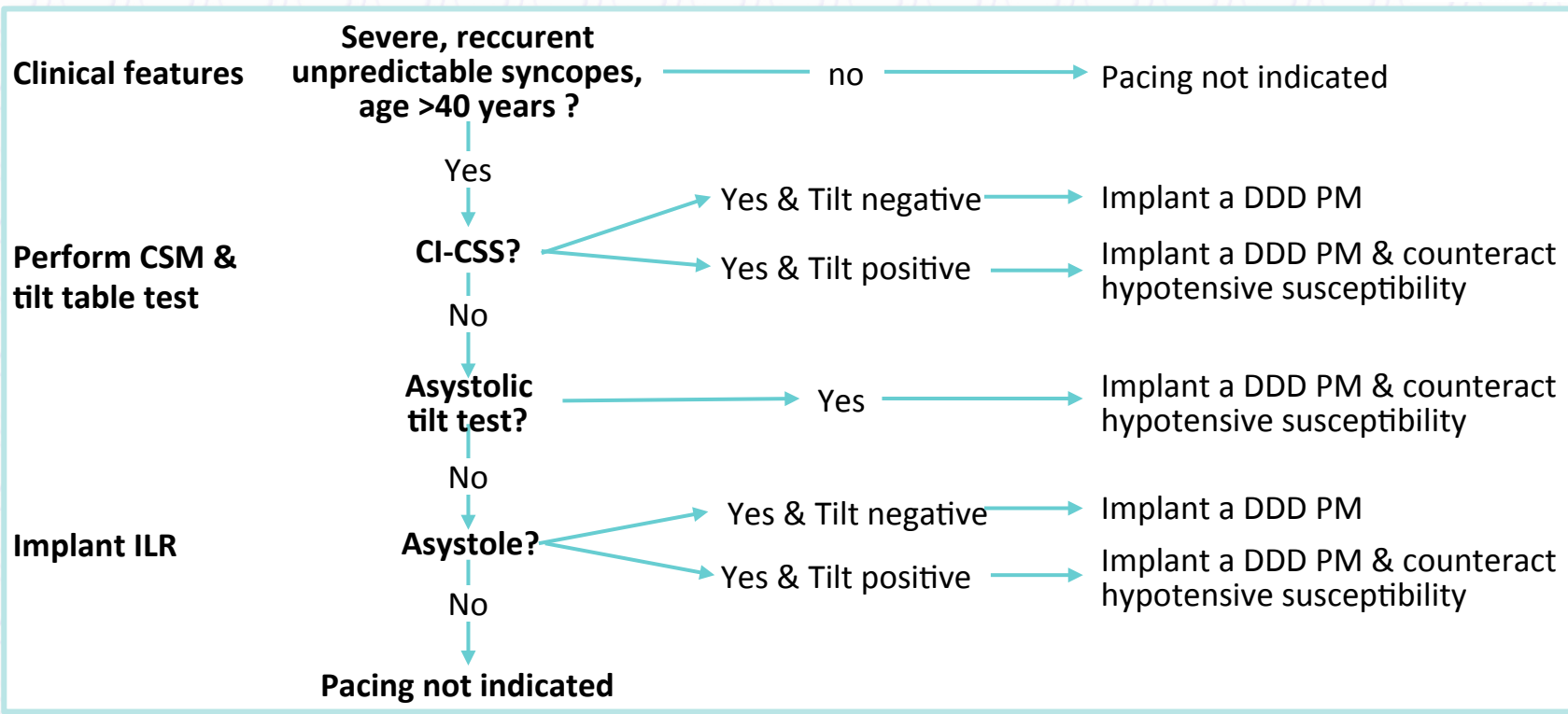
Treatment of Reflex syncope



Pacing for reflex syncope






Pacing for reflex syncope: decision pathway

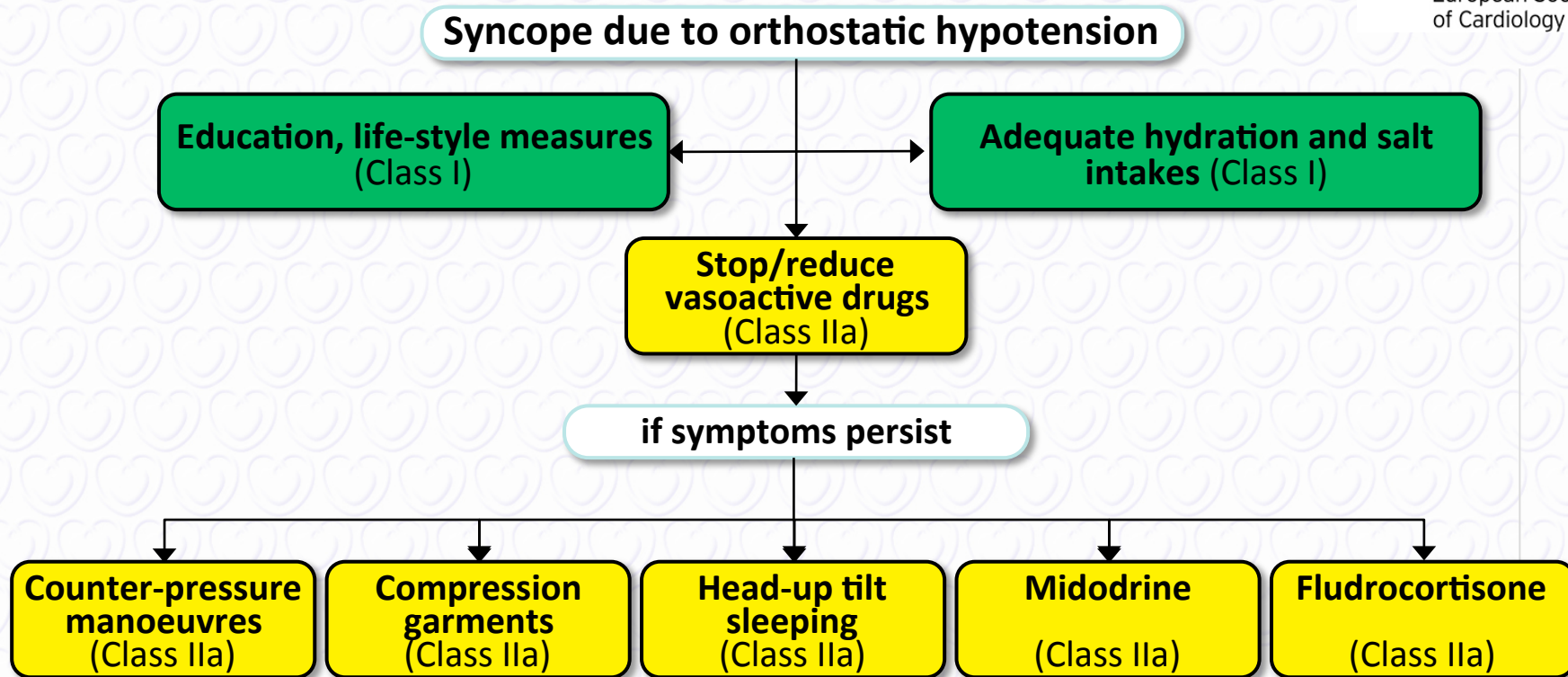


Treatment of syncope: General principles

Cardiac pacing in different clinical settings

Expected 2-year syncope recurrence rate	Clinical setting	
 High efficacy ($\leq 5\%$ recurrence rate)	Established bradycardia	no hypotensive mechanism
 Moderate efficacy (5% to 25% recurrence rate)	Established bradycardia	<i>and</i> hypotensive mechanism
 Low efficacy ($> 25\%$ recurrence rate)	Suspected bradycardia	<i>and</i> hypotensive mechanism

Treatment of syncope: Orthostatic hypotension



Observation

- Homme, 77 ans
- Coronarien stable (stents 2016); AVC 2016 (pas de séquelles)
- depuis 2010, syncopes récidivantes
 - parfois lors d'émotions,
 - parfois sans contexte particulier
 - pas de prodromes
 - multiples traumatismes
 - 2 épisodes par an, 3 au cours du dernier mois

- Examen normal (pas d'hypotension orthostatique)





- Examen normal (pas d'hypotension orthostatique), ECG normal
- Quelles explorations?

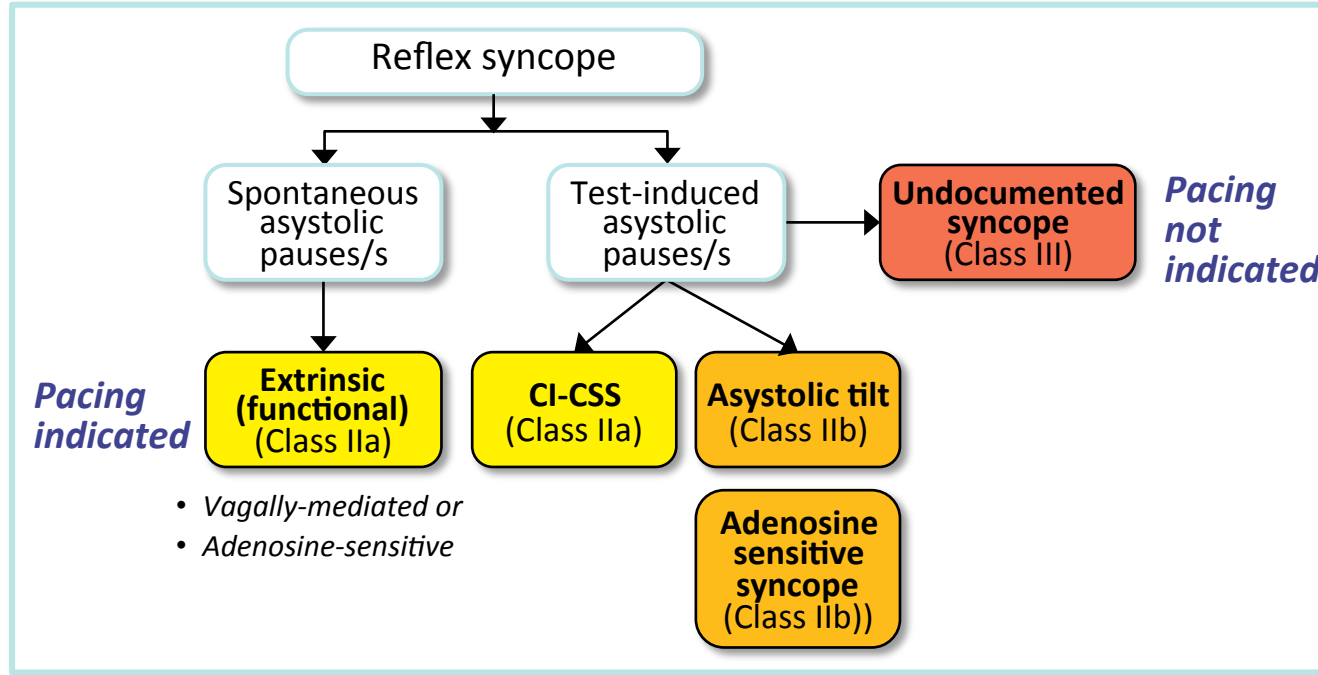
- Examen normal (pas d'hypotension orthostatique), ECG normal
- MSC: négatif
- Tl: négatif
- Autres explorations: ?

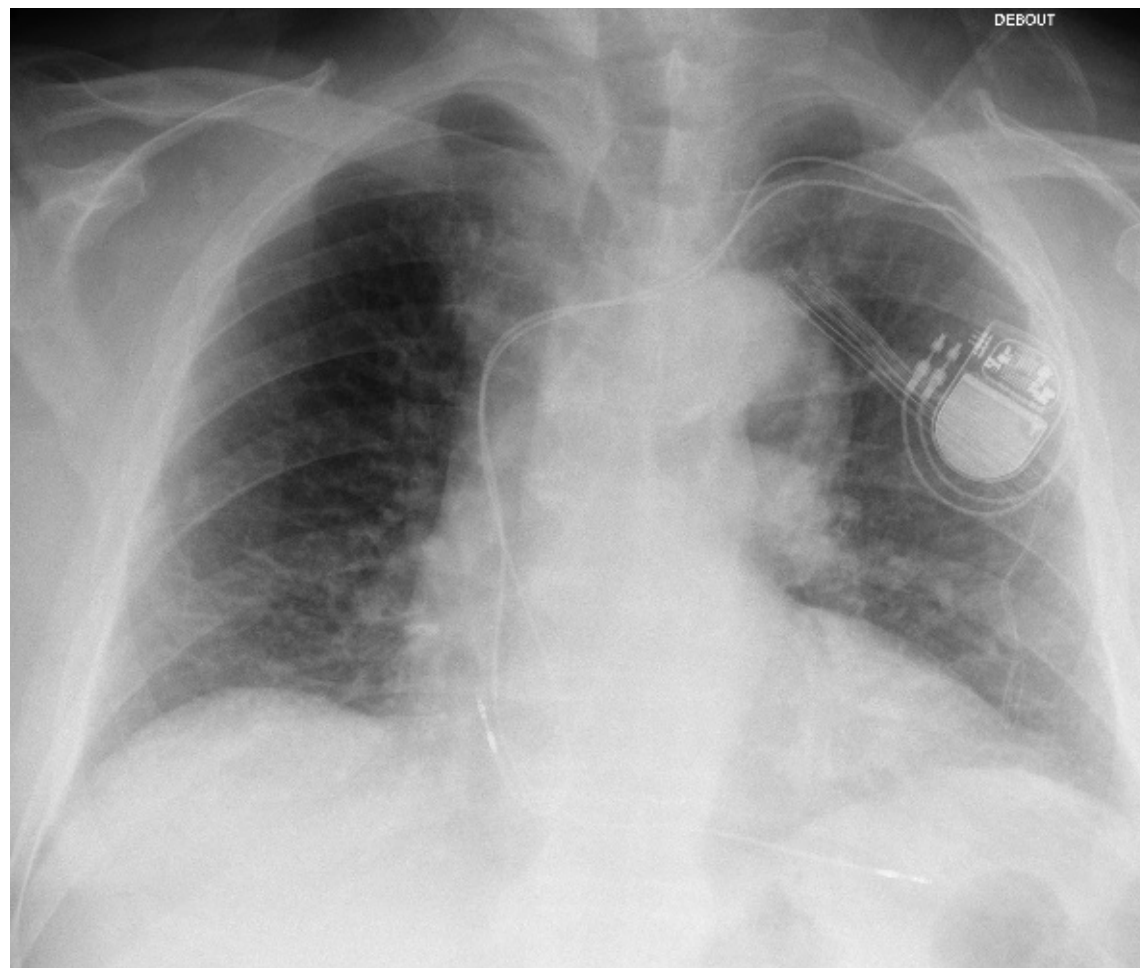


- Implanté 10/2018 d'un moniteur ECG sous-cutané
- Carelink®
- Récidive syncopale : traumatisme, pas de souvenir précis de l'épisode...

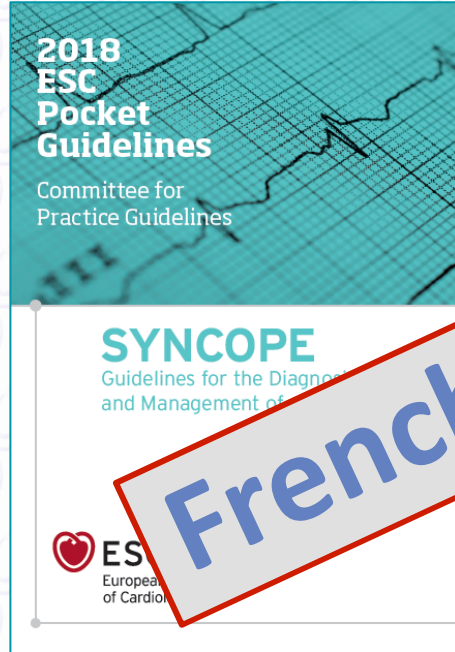


Pacing for reflex syncope



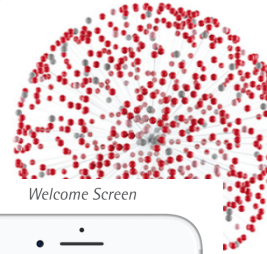


ESC Pocket Guidelines & APP will be available at the ESC Congress in Munich 2018

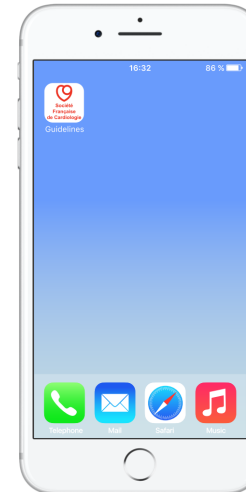


French App soon coming!

Congress
2018
August



App Icons



Welcome Screen

