

# Quoi de neuf dans les dernières recommandations sur les syncopes?



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# 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)**

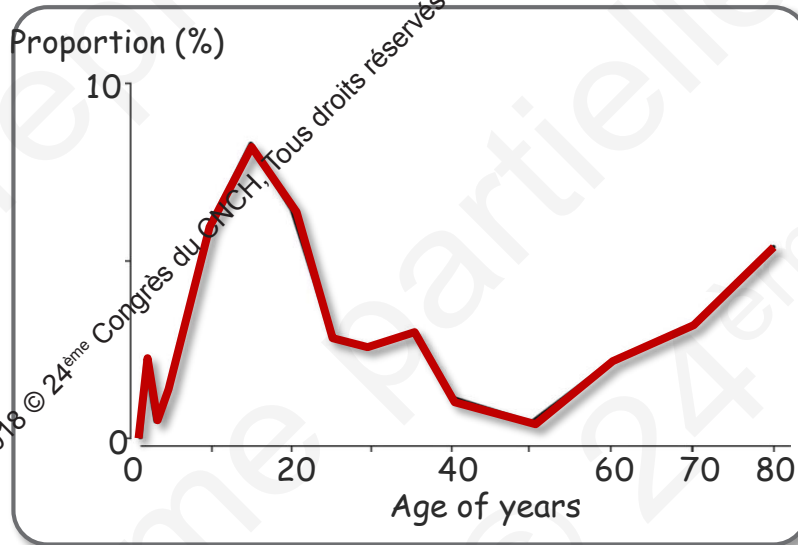
**Developed with the special contribution of the European Heart Rhythm Association (EHRA)**

**Endorsed by: European Academy of Neurology (EAN), European Federation of Autonomic Societies (EFAS), European Federation of Internal Medicine (EFIM), European Union Geriatric Medicine Society (EUGMS), European Society of Emergency Medicine (EuSEM)**

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# Epidemiology

## Age of first faint



# Diagnosis: initial evaluation

1. At the initial evaluation four key questions:

1. Was the event TLOC?
2. In cases of TLOC are they of syncopal or non-syncopal origin?
3. In cases of suspected syncope, is there a clear aetiological diagnosis?
4. Is there evidence to suggest a high risk of cardiovascular events or death?

2. At the evaluation of TLOC in ED, three key questions:

1. Is there a serious underlying cause that can be identified?
2. If the cause is uncertain, what is the risk of a serious outcome?
3. Should the patient be admitted to hospital?

3. In all patients, perform a complete history taking, physical examination (including standing BP measurement), and standard ECG.

4. ECG monitoring (in bed or telemetry) in high-risk patients when in suspicion of arrhythmic syncope.

5. Echocardiogram if previously known heart disease, or data suggestive of structural heart disease or syncope secondary to cardiovascular cause.

6. CSM in patients >40 years of age if syncope with a possible reflex mechanism.

7. Tilt testing in suspicion of syncope of reflex or orthostatic cause.

8. Blood tests when clinically indicated

# Diagnosis: subsequent investigations

1. Prolonged ECG monitoring (external or implantable) in recurrent severe unexplained syncope with all of these features:

1. Clinical or ECG features with arrhythmic syncope suspicion.
2. High probability of recurrence of syncope in a reasonable time.
3. A patient who may benefit from a specific therapy if a cause for syncope is found.

2. EPS in all patients with unexplained syncope and bi-fascicular BBB (impending high-degree AV block) or suspected tachycardia.

3. Exercise stress test in syncope during or shortly after exertion.

4. Consider basic autonomic function tests (Valsalva manoeuvre and deep-breathing test) and ABPM in suspicion of neurogenic or OH syncope.

5. Video recording (at home or in hospital) of TLOC suspected to be of non-syncopal nature.

1. Reassure all patients with reflex syncope and OH, explain the diagnosis and the risk of recurrence, and explain how to avoid triggers and situations.
2. In patients with severe forms of reflex syncope, select one or more of the following treatments according to the clinical features:
  1. Midodrine or fludrocortisone in young patients with low BP phenotype.
  2. Counter-pressure manoeuvres (including tilt training if needed) in young patients with prodromes.
  3. ILR-guided management strategy in patients without or with short prodromes.
  4. Discontinuation/reduction of hypotensive therapy targeting a systolic BP of 140 mmHg in old hypertensive patients.
  5. Pacemaker implantation in older patients with dominant cardio-inhibitory reflex syncope.
3. In patients with OH, select one or more of the following additional specific treatments according to clinical severity:
  1. Education regarding life-style manoeuvres.
  2. Adequate hydration and salt intake.
  3. Discontinuation/reduction of hypotensive therapy.
  4. Counter-pressure manoeuvres.
  5. Abdominal binders and/or support stockings.
  6. Head-up tilt sleeping.
  7. Midodrine or fludrocortisone.
4. Be sure that all patients with cardiac syncope receive the specific therapy of the culprit underlying disease or arrhythmia.
5. Consider the risk-benefits ratio of ICD implantation in patients with unexplained syncope at high risk of SCD.
6. Always re-evaluate the diagnostic process and consider alternative therapies if there is a failure of the management rules.

### 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: “fatal asystole”

### (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

## 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

### 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
	<b>Contraindications to CSM</b>	
	<b>Tilt testing: indication for syncope</b>	
	<b>Tilt testing for educational purposes</b>	
	<b>Tilt testing: diagnostic criteria</b>	
	<b>Tilt testing for assessing therapy</b>	
	<b>Holter for unexplained syncope</b>	
	<b>ECG Monitoring: presyncope &amp; asymptomatic arrhythmias</b>	
	<b>Adenosine triphosphate test</b>	
	<b>EPS-guided pacemaker: prolonged SNRT</b>	

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



# What is new in 2018 syncope guidelines ? (2)

## CHANGE IN RECOMMENDATIONS

2009

2018

EPS-guided pacemaker: HV >70 ms

Empiric pacing in bifascicular block

Therapy of reflex syncope: PCM

Therapy of OH: PCM

Therapy of OH: abdominal binders

Therapy of OH: head-up tilt sleeping

Syncope & SVT/VT: AA drugs  
Expert opinion

2009

2018

Syncope & AF: catheter ablation  
Expert opinion

ICD: LVEF >35% and syncope

Syncope & high risk HCM: ICD

Syncope & ARVC: ICD

Psychiatric consultation for PPS  
Expert opinion

I

IIa

IIb

III

Taken  
out

# What is new in 2018 syncope guidelines ? (3)

## Management of syncope in ED (section 4.1.2)

- *Low-risk*: discharge from ED
- *High-risk*: early intensive evaluation in ED, SU versus admission
- *Neither high or low*: observation in ED or in SU instead of being hospitalized

## Video recording (section 4.2.5):

- Video recordings of spontaneous events

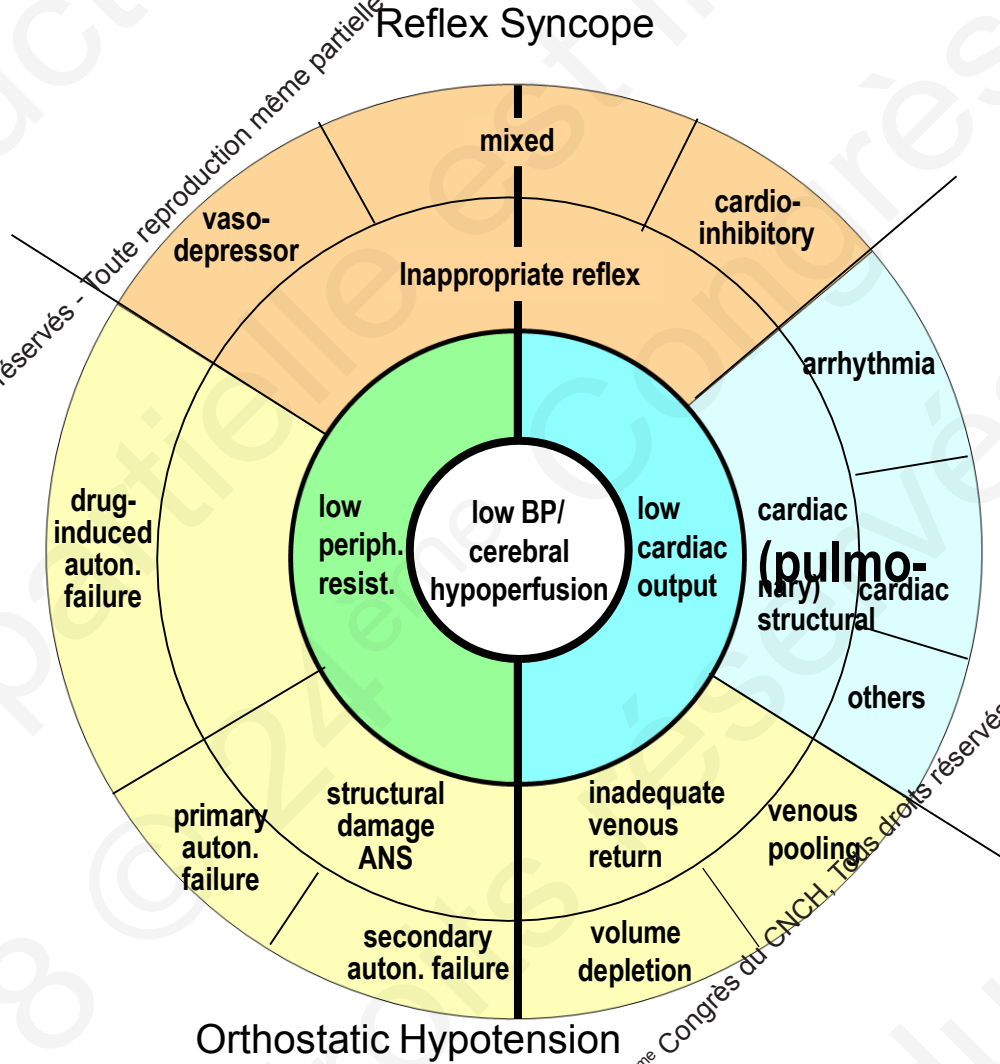
## ILR indications (section 4.2.4.7):

- In patients with suspected unproven epilepsy
- In patients with unexplained falls

## ILR indications (section 5.6):

- In patients with primary cardiomyopathy or inheritable arrhythmogenic disorders who are at low risk of sudden cardiac death, as an alternative to ICD

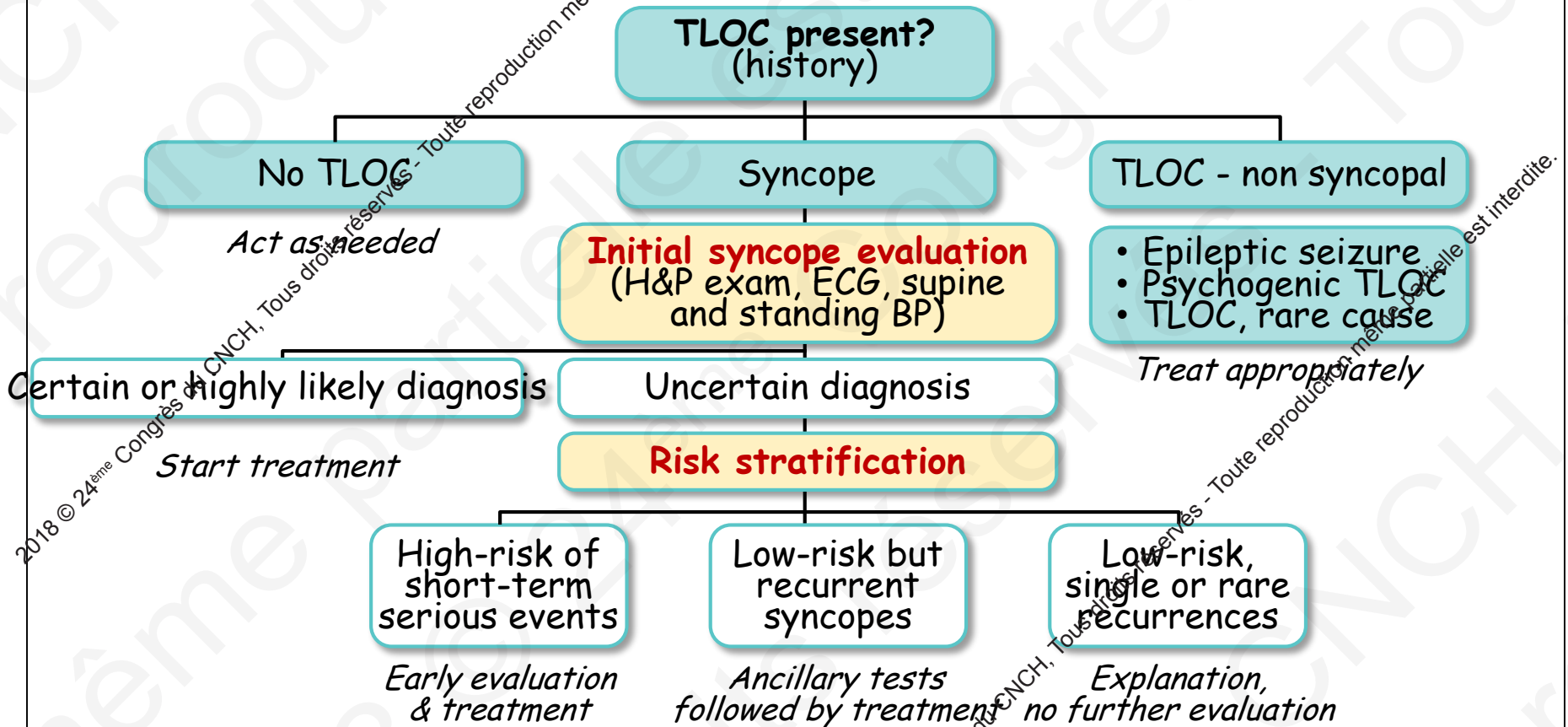
# Pathophysiology



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# Presentation of patient with probable TLOC



# Risk stratification at the initial evaluation (I)

## Low-risk

## High-risk (red flag)

### Syncopal event

1. Associated with prodrome typical of reflex syncope (e.g. light-headedness, feeling of warmth, sweating, nausea, vomiting).
2. After sudden unexpected unpleasant sight, sound, smell, or pain.
3. After prolonged standing or crowded, hot places.
4. During a meal or postprandial.
5. Triggered by cough, defaecation, or micturition.
6. With head rotation or pressure on carotid sinus (e.g. tumour, shaving, tight collars).
7. Standing from supine/sitting position.

### Major

1. New onset of chest discomfort, breathlessness, abdominal pain, or headache.
2. Syncope during exertion or when supine.
3. Sudden onset palpitation immediately followed by syncope.

**Minor** (high risk only if associated with structural heart disease or abnormal ECG):

1. No warning symptoms or short (<10 s) prodrome,
2. Family history of SCD at young,
3. Syncope in the sitting position.

# Risk stratification at the initial evaluation (2)

Low-risk	High-risk (red flag)
<b>Past medical history</b>	
<ol style="list-style-type: none"> <li>1. Long history (years) of recurrent syncope with low-risk features with the same characteristics of the current episode</li> <li>2. Absence of structural heart disease.</li> </ol>	<p><b>Major</b></p> <ol style="list-style-type: none"> <li>1. Severe structural or coronary artery disease (heart failure, low LVEF or previous myocardial infarction).</li> </ol>
<b>Physical examination</b>	
<ol style="list-style-type: none"> <li>1. Normal examination.</li> </ol>	<p><b>Major</b></p> <ol style="list-style-type: none"> <li>1. Unexplained systolic BP in the ED &lt;90 mmHg.</li> <li>2. Suggestion of gastrointestinal bleed on rectal examination.</li> <li>3. Persistent bradycardia (&lt;40 b.p.m.) in awake state and in absence of physical training.</li> <li>4. Undiagnosed systolic murmur.</li> </ol>

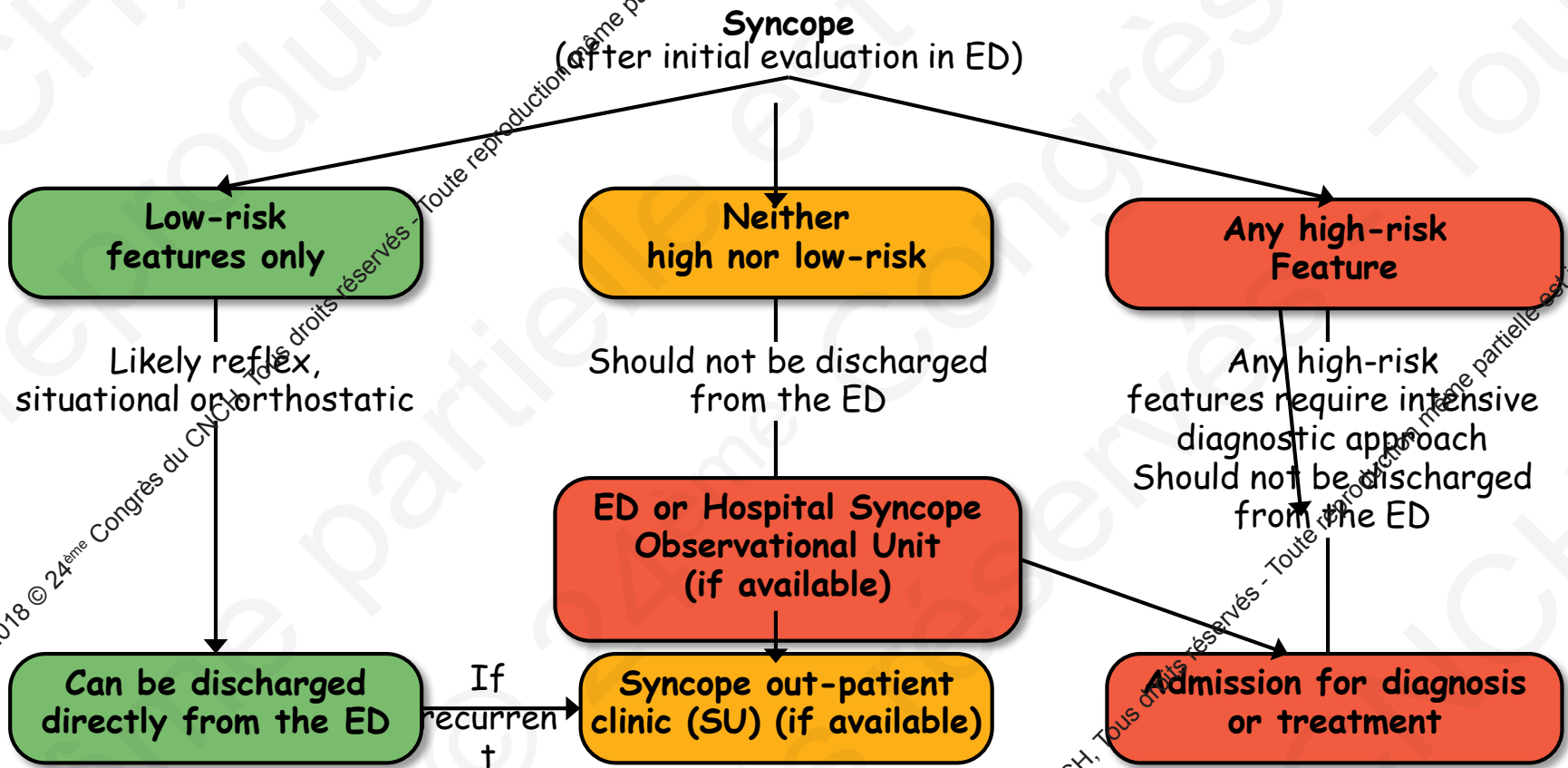
# Risk stratification at the initial evaluation (3)

Low-risk	High-risk (red flag)
<b>ECG</b>	
<p>1. Normal ECG.</p>	<p><b>Major</b></p> <ol style="list-style-type: none"> <li>1. ECG changes consistent with acute ischaemia .</li> <li>2. Mobitz II second- and third-degree AV block .</li> <li>3. Slow AF (&lt;40 b.p.m.) .</li> <li>4. Persistent sinus bradycardia (&lt;40 b.p.m.) .</li> <li>5. Bundle branch block or IVCD .</li> <li>6. Q waves consistent with CAD or cardiomyopathy .</li> <li>7. Sustained and non-sustained VT .</li> <li>8. Dysfunction of a pacemaker or ICD .</li> <li>9. Type 1 Brugada pattern .</li> <li>10. Long QT.</li> </ol>

# Risk stratification at the initial evaluation (4)

Low-risk	High-risk (red flag)
<b>ECG</b>	
<p>1. Normal ECG.</p>	<p><b>Minor</b> (only if history suggests arrhythmic syncope):</p> <ol style="list-style-type: none"> <li>1. Mobitz I second-degree AV block and 1° degree AV block with markedly prolonged PR interval,</li> <li>2. Asymptomatic inappropriate mild sinus bradycardia (40-50 b.p.m.), or slow AF (40-50 b.p.m.),</li> <li>3. Paroxysmal SVT or atrial fibrillation,</li> <li>4. Pre-excited QRS complex,</li> <li>5. Short QTc interval (<math>\leq 340</math> ms),</li> <li>6. Atypical Brugada patterns,</li> <li>7. Negative T waves suggestive of ARVC.</li> </ol>





## Syncope due to intrinsic cardiac SND or AV block

### ECG-documented bradycardia

### Bifascicular BBB (ECG-undocumented bradycardia)

**Sympt. SND (Class I)**

**Asympt. SND (Class IIa)**

**2° and 3° AV block (Class I)**

**EPS or ILR positive (Class I)**

**EPS/ILR negative or not done (Class IIb)**

**Pacing indicated**

*Established relationship between SB and synco*

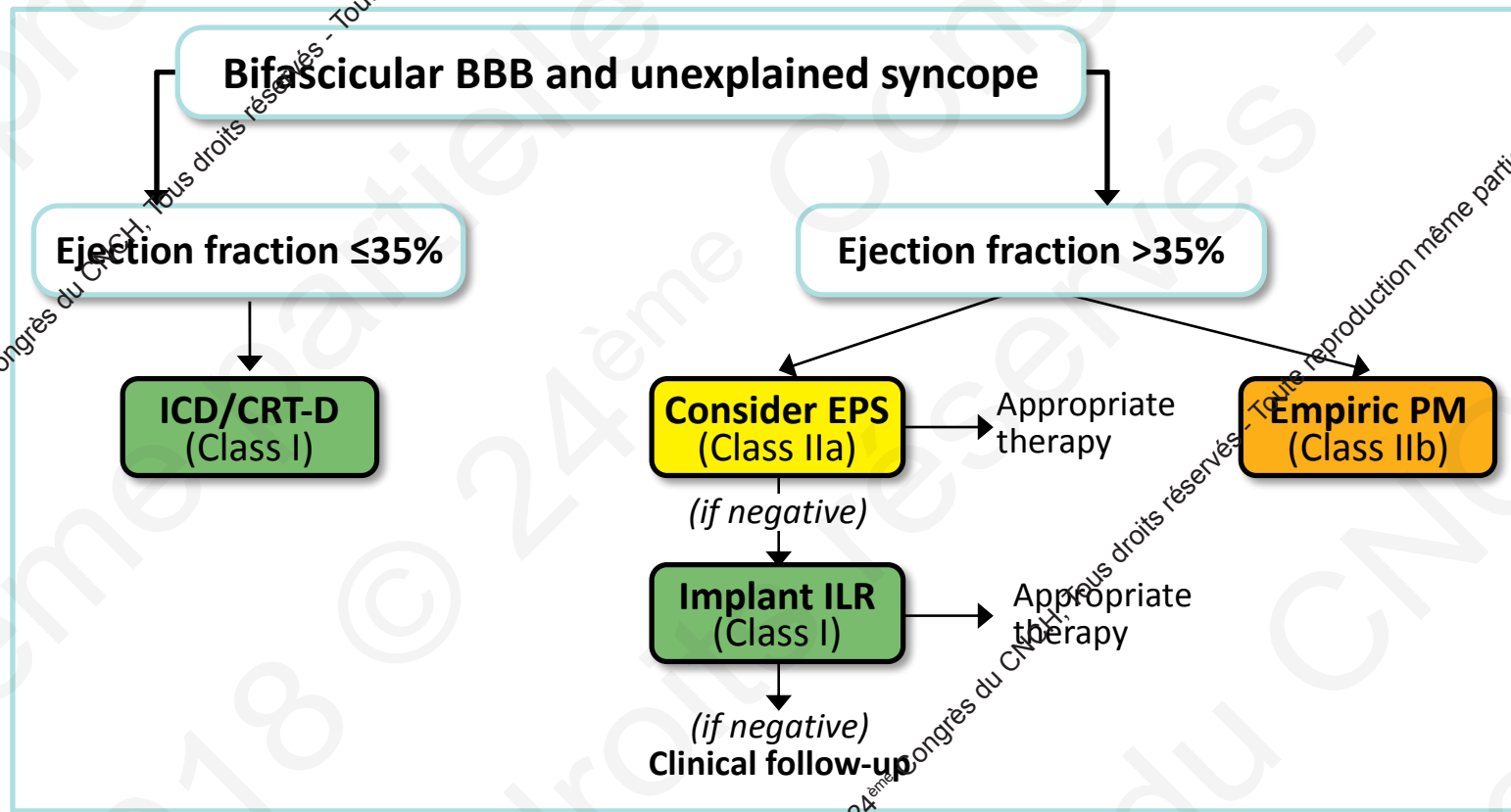
*Non-established relationship between SB and syncope*

- Persistent AVB
- Paroxysmal AV block (narrow QRS and BBB)
- AF with slow HR

- HV > 70ms or induced AV block
- Sympt. pause > 3"
- Asympt. pause > 6"

*Empiric pacing (mechanism uncertain)*

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# Conclusion

➤ Des recommandations pluridisciplinaires

➤ Qui se veulent pratique