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GLOBAL EXPERTS, LOCAL LEARNING

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Syncope Guidelines: What's New?

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Shen W-K, et al.

2017 ACC/AHA/HRS Syncope Guideline

2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines, and the Heart Rhythm Society

Developed in Collaboration With the American College of Emergency Physicians and Society for Academic Emergency Medicine

Endorsed by the Pediatric and Congenital Electrophysiology Society

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Causes of Syncope

- Reflex-mediated (Vasovagal, situational, Carotid sinus syndrome)
- Orthostatic hypotension
- Neurologic
- Cardiac
- POTs
- Psychogenic

Syncope Initial Evaluation

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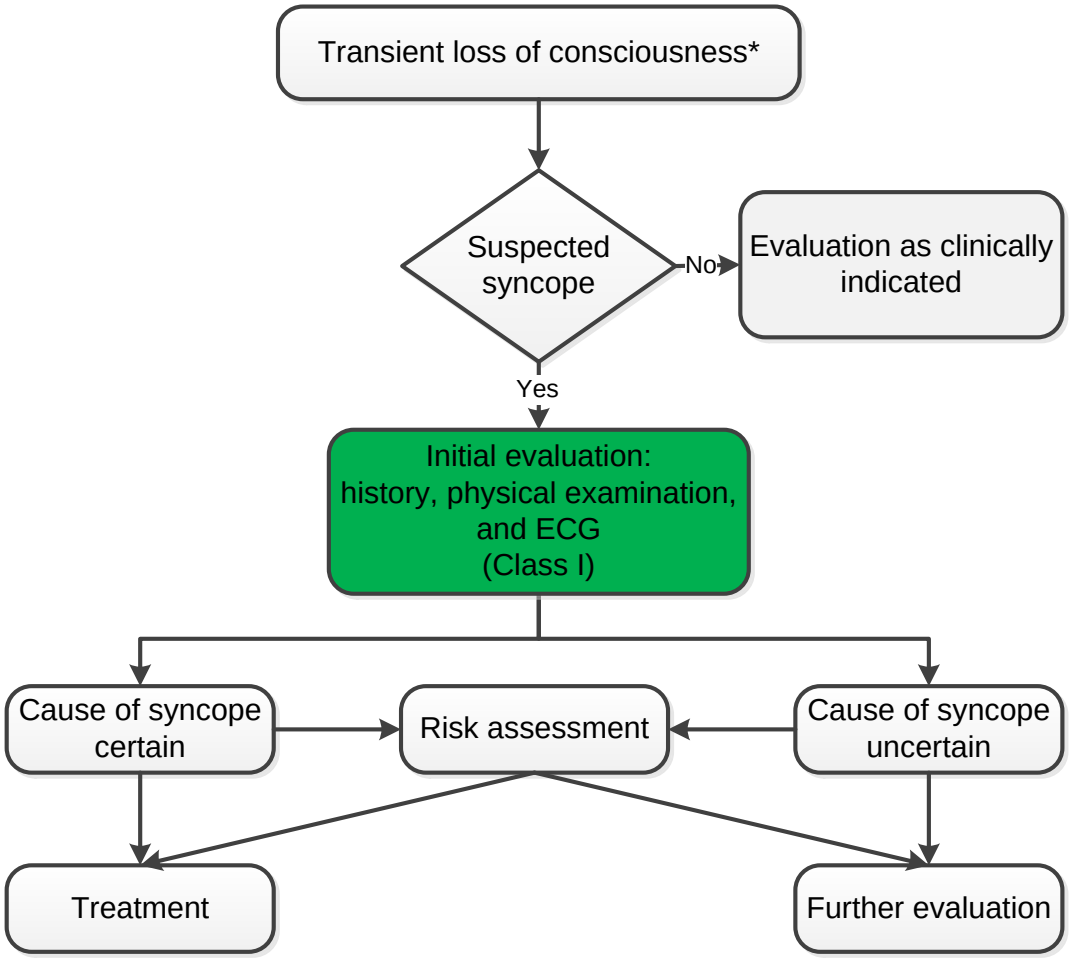

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Key Features of History

- **Prodromal symptoms**
  - **Nausea, diaphoresis, claustrophobia, palpitations**
- **Abruptness of onset, offset**
  - **Drop attack, History**
- **Associated incontinence, seizure activity**
  - **Post-ictal confusion, prostration**

Key Features of Examination

- **Arterial pressure**
  - Supine, seated, upright, upright after 1-2 mins
  - Right and left arms
- **Neck and precordium**
  - Carotid compression
  - RV lift, palpable P2, thrills
- **Cardiac murmur**
  - Effects of valsalva maneuver, standing, squatting
  - Left decubitus position

History and Physical Examination

COR	LOE	Recommendation
I	B-NR	A detailed history and physical examination should be performed in patients with syncope.

Electrocardiography

COR	LOE	Recommendation
I	B-NR	In the initial evaluation of patients with syncope, a resting 12-lead ECG is useful.

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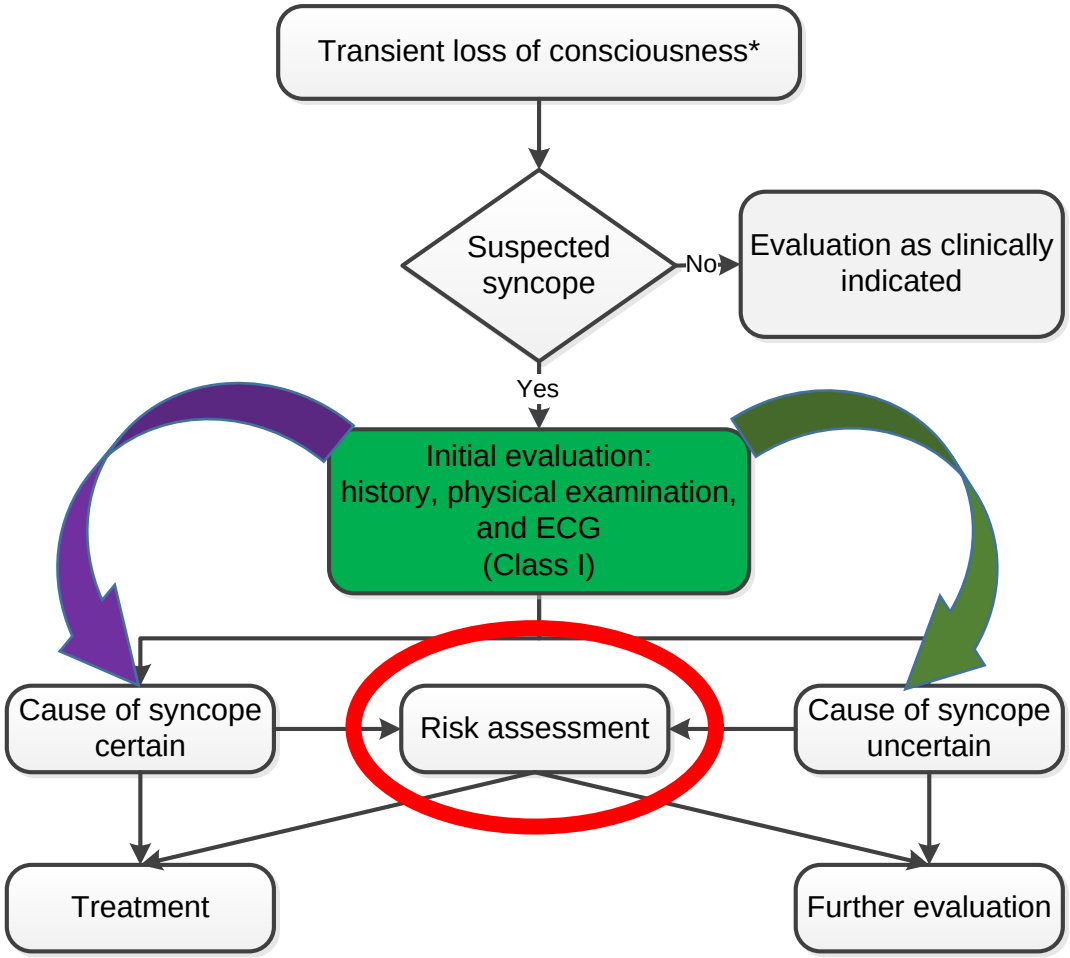
Syncope Initial Evaluation



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Risk Assessment

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Cardiac High Risk

-Acute Coronary Syndrome,

- Severe Valvular Disease, Cardiomyopathy
- Previous Ventricular Arrithmia
- Previous AMI or HF
- Long QT, Familiar Sudden Deaths
- LBBB or RBBB or Bradiarrithmia
- AF and Nonsustained VT
- Pacemakers or ICD

Clinical High Risk

- Stroke
- Anemia / Active Bleeding
- Major Trauma
- Frequent and recurrents syncopes
- Seizures
- Mental alterations

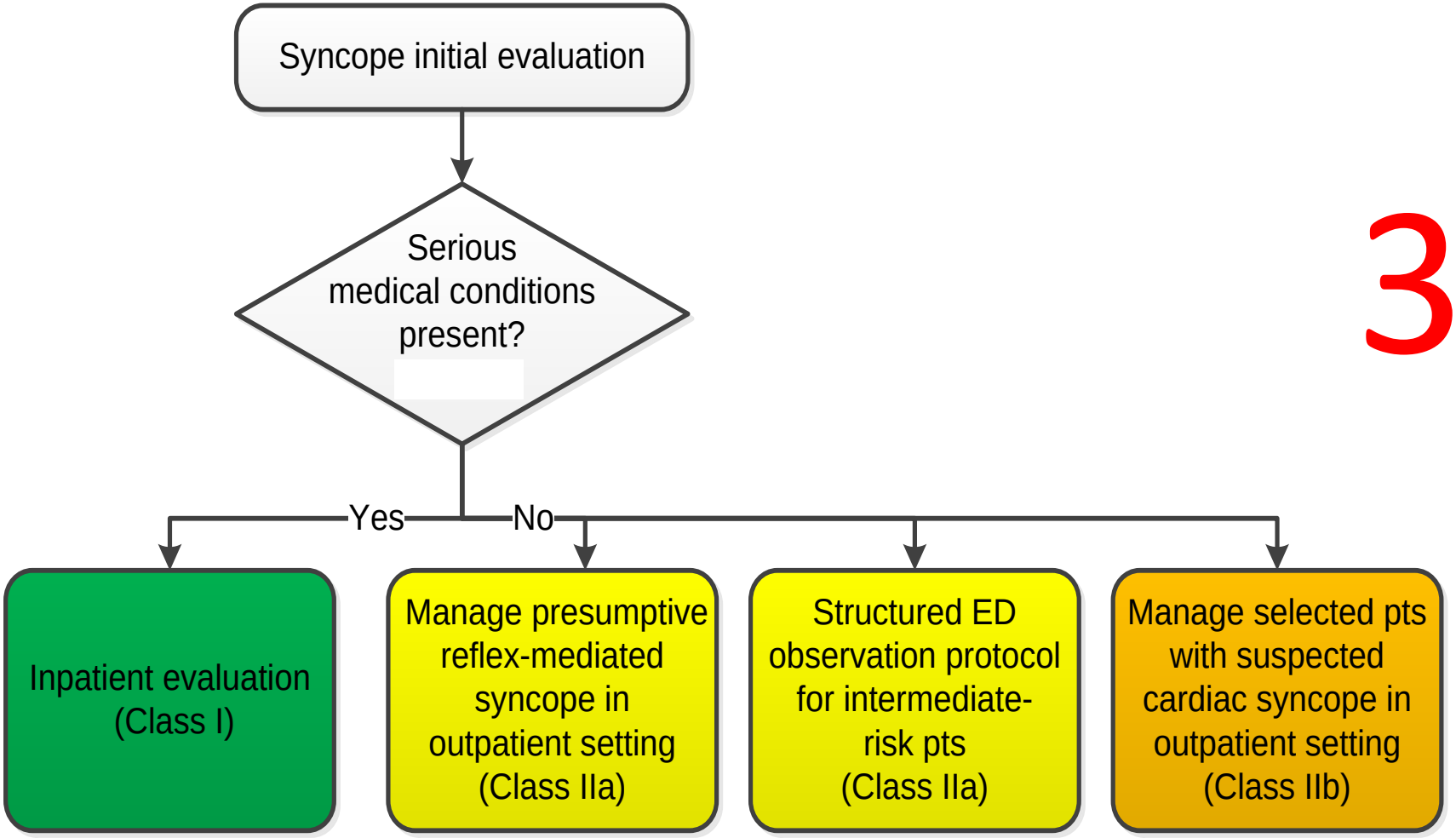
Is "CARDIAC"?

- Supine position
- During exercise
- Palpitations
- Severe Cardiac Disease
- Abnormal ECG

Is "NEUROGENIC"?

- Long standing
- with Nausea and vomiting
- Post exercise
- Temporal relation with change medication´s doses

Patient Disposition After Initial Evaluation for Syncope



Disposition After Initial Evaluation

COR	LOE	Recommendations
I	B-NR	**Hospital evaluation** and treatment are recommended for patients presenting with syncope who have a serious medical condition potentially relevant to the cause of syncope identified during initial evaluation.
IIa	C-LD	It is reasonable to manage patients with presumptive reflex-mediated syncope in the **outpatient setting** in the absence of serious medical conditions.
IIa	B-R	In intermediate-risk patients with an unclear cause of syncope, use of a structured **ED observation** protocol can be effective in reducing hospital admission.
IIb	C-LD	It may be reasonable to manage selected patients with suspected cardiac syncope in the **outpatient** setting in the absence of serious medical condition.

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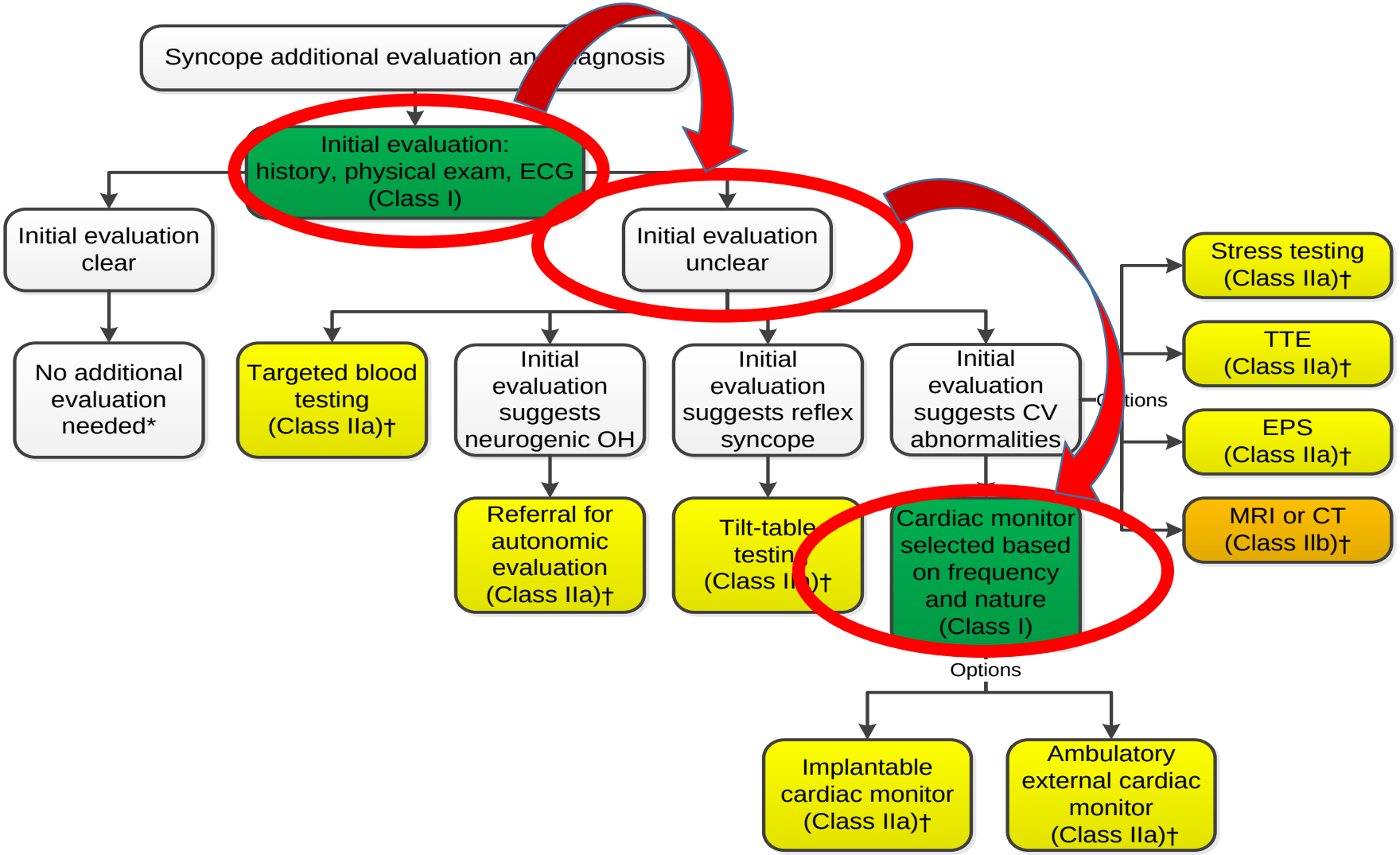
Additional Evaluation and Diagnosis



Cardiac Imaging

COR	LOE	Recommendations
IIa	B-NR	**Transthoracic echocardiography can be useful** in selected patients presenting with syncope if structural heart disease is suspected.
IIb	B-NR	**CT or MRI may be useful** in selected patients presenting with syncope of suspected cardiac etiology.
III: No Benefit	B-R	**Routine cardiac imaging is not useful** in the evaluation of patients with syncope unless cardiac etiology is suspected on the basis of an initial evaluation, including history, physical examination, or ECG.

Stress Testing

COR	LOE	Recommendation
IIa	C-LD	**Exercise stress testing can be useful** to establish the cause of syncope in selected patients who experience syncope or presyncope during exertion.

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In-Hospital Telemetry

COR	LOE	Recommendation
I	B-NR	**Continuous ECG monitoring is useful** for hospitalized patients admitted for syncope evaluation with suspected cardiac etiology.

Electrophysiological Study

COR	LOE	Recommendations
IIa	B-NR	**EPS can be useful** for evaluation of selected patients with syncope of suspected arrhythmic etiology.
III: No Benefit	B-NR	EPS is **not recommended** for syncope evaluation in patients **with a normal ECG and normal cardiac structure and function,** unless an arrhythmic etiology is suspected.

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Tilt-Table Testing

COR	LOE	Recommendations
IIa	B-R	If the diagnosis is unclear after initial evaluation, tilt-table testing **can be useful for patients with suspected VVS**.
IIa	B-NR	Tilt-table testing can be useful for patients with syncope and suspected delayed OH when initial evaluation is not diagnostic.
IIa	B-NR	Tilt-table testing is reasonable to distinguish convulsive syncope from epilepsy in selected patients.
IIa	B-NR	Tilt-table testing is reasonable to establish a diagnosis of pseudosyncope.
III: No Benefit	B-R	Tilt-table testing **is not recommended to predict a response** to medical treatments for VVS.

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Neurological and Imaging Diagnostics

COR	LOE	Recommendations
IIa	C-LD	Simultaneous monitoring of an EEG and hemodynamic parameters during tilt-table testing can be useful to distinguish among syncope, pseudosyncope, and epilepsy.
III: No Benefit	B-NR	**MRI and CT of the head** are not recommended in the routine evaluation of patients with syncope in the absence of focal neurological findings or **head injury** that support further evaluation.
III: No Benefit	B-NR	**Carotid artery imaging is not recommended** in the routine evaluation of patients with syncope in the absence of focal neurological findings that support further evaluation.
III: No Benefit	B-NR	**Routine recording of an EEG is not recommended** in the evaluation of patients with syncope in the absence of specific neurological features suggestive of a seizure.

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KEY MESSAGES

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Class I

1.- History and physical examination

2.- ECG

3.- Cause and Short and long term risk evaluation

4.- Hospital evaluation and Treatments

5.- Vasovagal is the most common cause of syncope.

6.- Syncope (OH) can be neurogenic, dehydration, or drugs

Vasovagal Syncope

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COR	LOE	Recommendations
I	C-EO	**Patient education** on the diagnosis and prognosis of VVS is recommended.
IIa	B-R	**Physical counter-pressure maneuvers** can be useful in patients with VVS who have a sufficiently long prodromal period.
IIa	B-R	**Midodrine** is reasonable in patients with recurrent VVS with no history of hypertension, HF, or urinary retention.
IIb	B-R	The usefulness of orthostatic training is uncertain in patients with frequent VVS.
IIb	B-R	**Fludrocortisone** might be reasonable for patients with recurrent VVS and inadequate response to salt and fluid intake, unless contraindicated.

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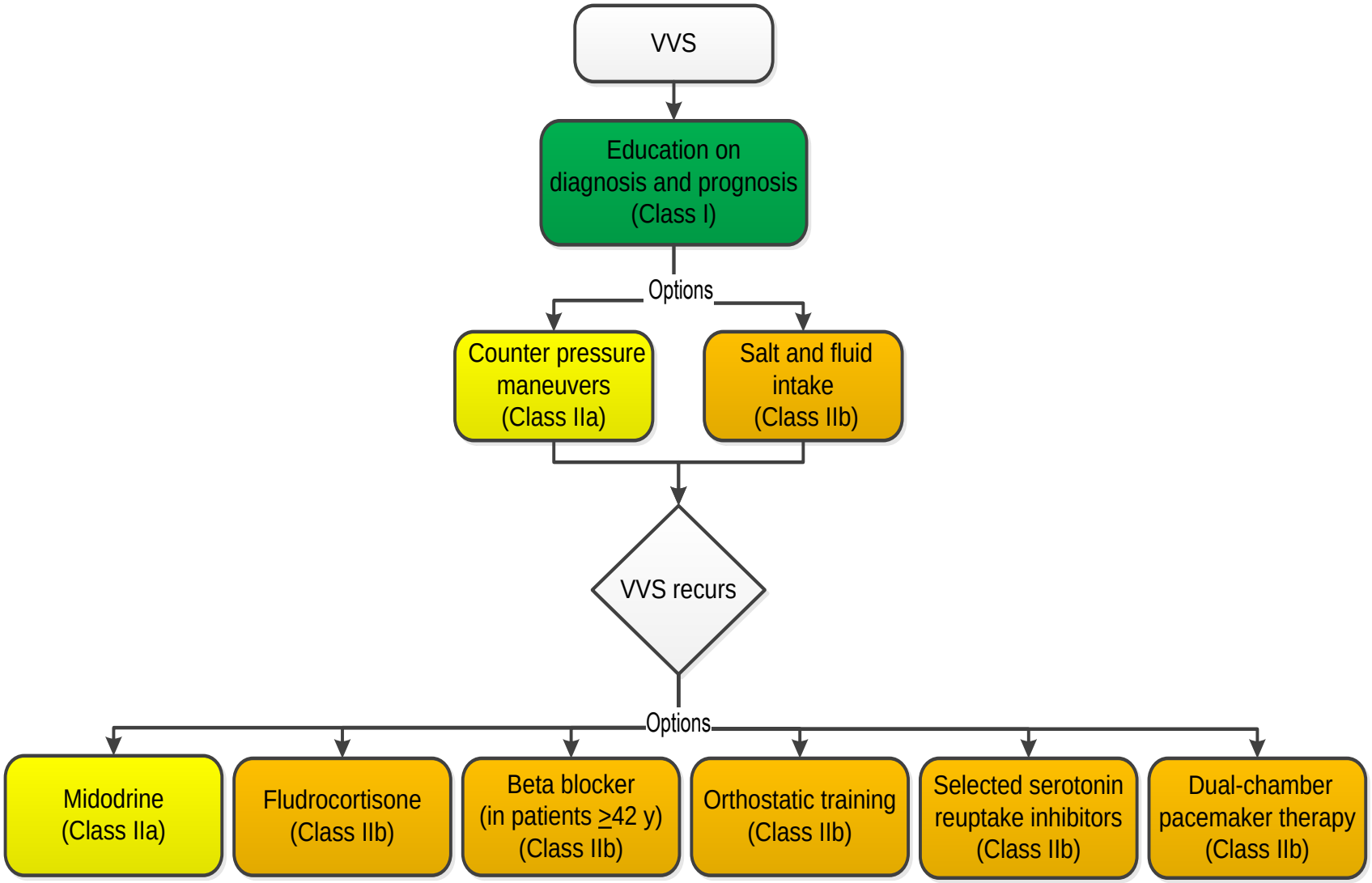
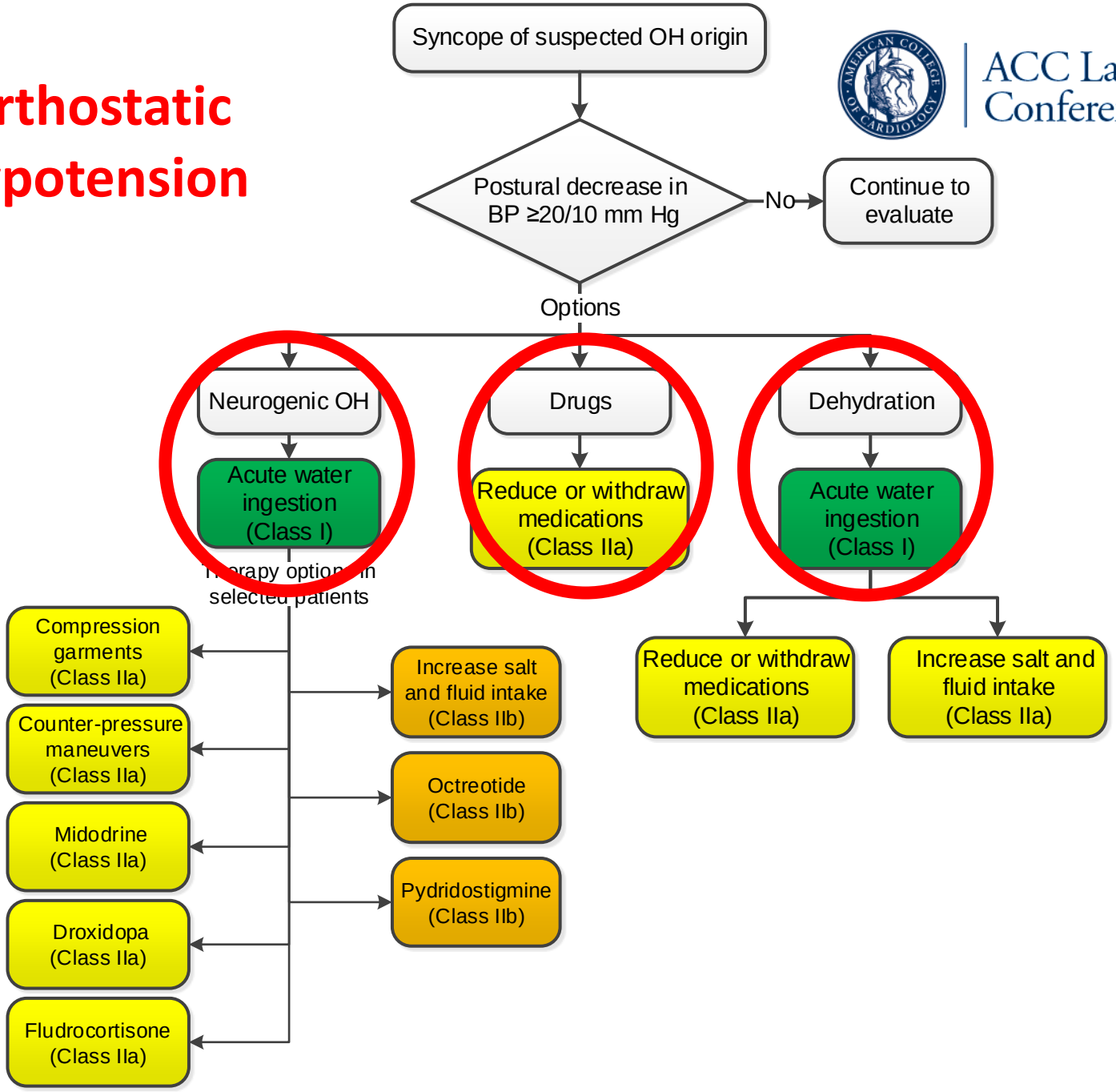
Vasovagal Syncope



Orthostatic Hypotension



Conclusions

- **Risk stratification is critical**
  - **History, physical examination and simple screening tests**
  - **for structural heart disease**
- **Medical therapy for vasovagal syncope is largely empiric**
  - **Beta antagonists, alpha agonists, volume expansion**
  - **Role of pacing unclear**
- **Tilt-testing is useful if it reproduces clinical symptoms**
  - **Premature use of tilt test in syncope algorithm is misleading**
- **Neurological testing is of little value unless suggested by history and examination**

Muchas gracias

Drs. Samuel Asirvatham & Miguel Gonzalez