



SOCIETÀ ITALIANA  
DI GERONTOLOGIA  
E GERIATRIA

# 60° CONGRESSO NAZIONALE

*NAPOLI 25-28 Novembre 2015*

# 16° CORSO INFERMIERI

*NAPOLI 26-27 Novembre 2015*



## **IL GRUPPO ITALIANO MULTIDISCIPLINARE SINCOPE (GIMSI): OLTRE UN DECENNIO DI COLLABORAZIONE**

**La gestione della sincope in  
Pronto Soccorso: presentazione  
del documento GIMSI**

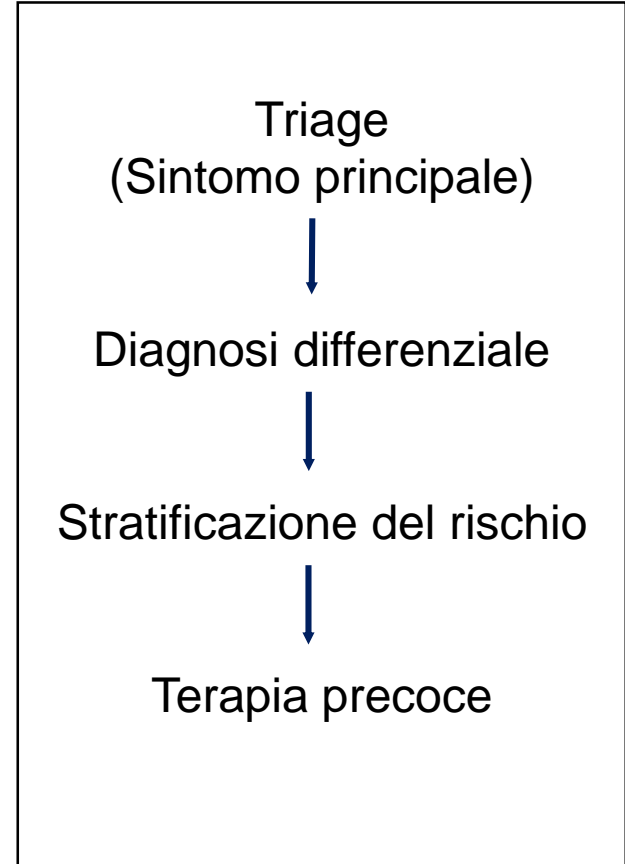
**Ivo Casagranda**

**DEA Alessandria**

***Emergenza***  
Pazienti gravi o con trauma maggiore

***Urgenze non programmate***  
Richiesta di visita urgente  
(comodità. Impegni familiari, mancanza di fiducia nel proprio medico)

***Rete di protezione***  
Popolazione fragile  
(Immigrati, anziani, problemi psicosociali)

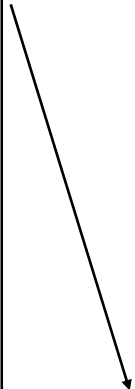
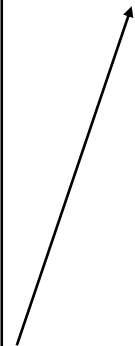
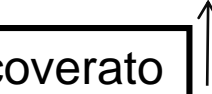
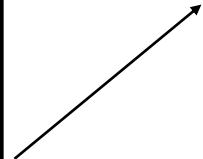
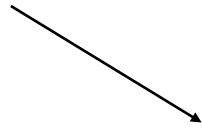


O.B.I.

Reparto

Ricoverato

Dimesso



## Sfide per il medico d'urgenza

### Diagnosi differenziale

- Differenziare la sincope dalla pseudosincope
- Definizione eziologica della sincope

### Stratificazione del rischio

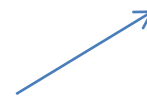
- Ricoverare i pazienti ad alto rischio o che necessitano di work up diagnostico aggressivo
- Dimettere i pazienti a basso rischio e i cui test diagnostici possono essere differiti nel tempo

# **Studi di sistemi di stratificazione del rischio**

## The OESIL Risk Score.

Eur Heart J 2003

Studio prospettico per coorti. End point



Morte per qualsiasi causa  
follow up 1 anno

Variabili identificate  
(ogni variabile 1 punto)

- Età > 65 aa.
- Storia di malattia cardiovascolare
- Sincope senza prodromi
- ECG anormale

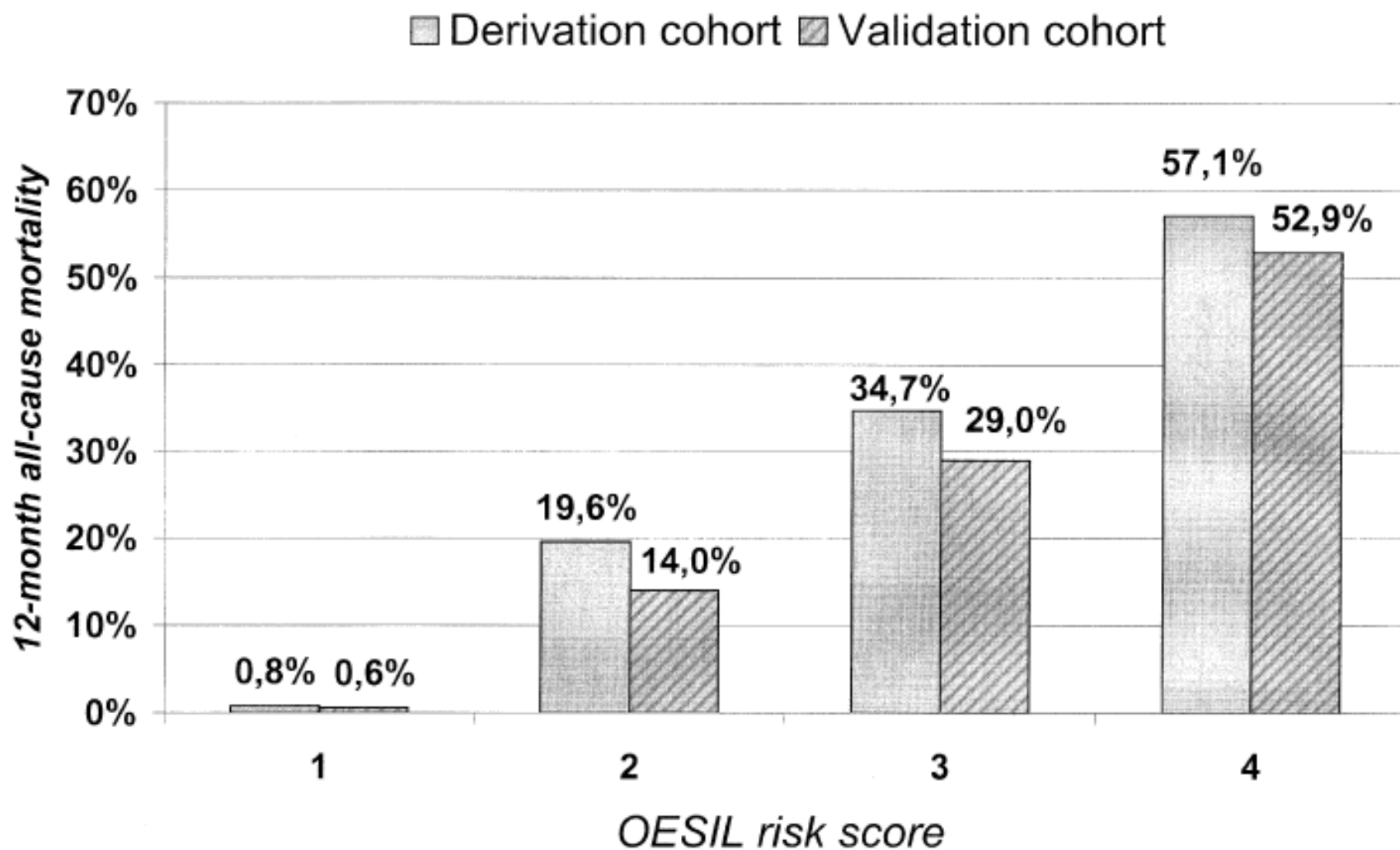


Fig. 2 Rates of 12-month all-cause mortality according to the OESIL score in the derivation and validation cohorts.

## The OESIL Risk Score.

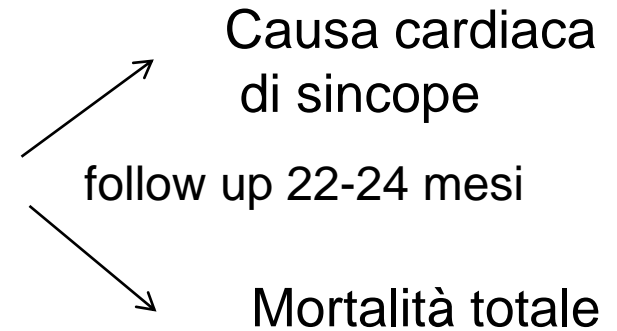
Eur Heart J 2003

Conclusioni: questo dimostra come con la sola anamnesi e l'elettrocardiogramma sia **possibile stratificare il rischio** in senso prognostico, già alla prima valutazione in Pronto Soccorso. Lo svantaggio maggiore riguarda l'elevato numero di pazienti da ricoverare.

## The EGSYS Score.

Heart 2008

Studio prospettico di coorte. End point composito



Variabili identificate

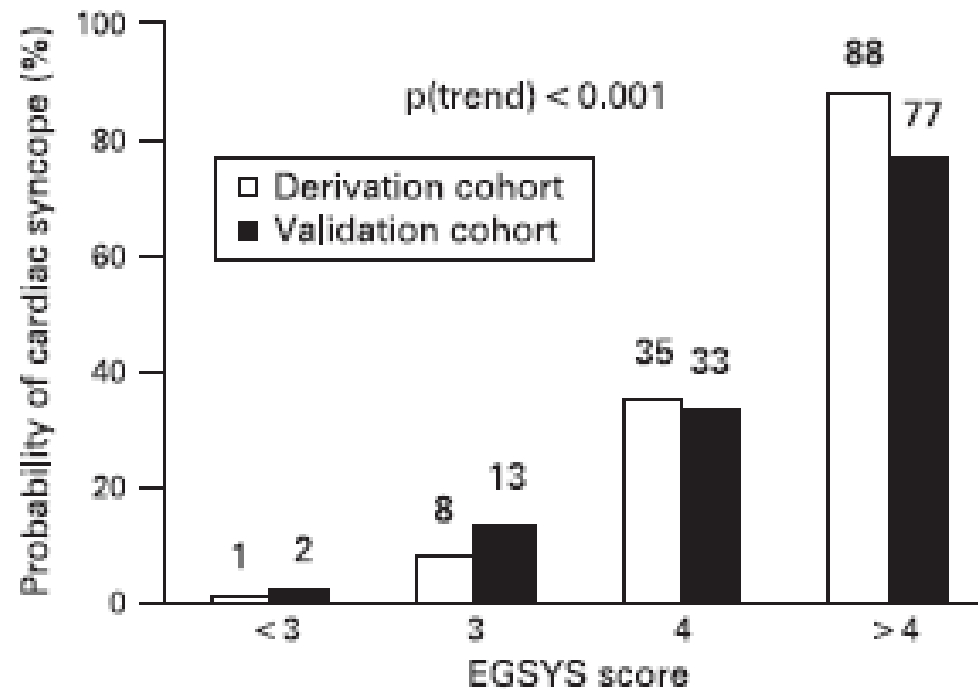
- Palpitazioni che precedono la sincope
- Storia clinica di malattia cardiaca o ECG anormale
- Sincope durante lo sforzo
- Sincope da supino
- Fattori precipitanti o predisponenti
- Prodromi autonomici



**Table 4** Predictors of cardiac cause of syncope on multivariable analysis and point scores for the diagnosis of cardiac syncope

Variable	p Value	OR (95% CI)	Regression coefficient	Score
Palpitations preceding syncope	<0.001	64.8 (8.9 to 469.8)	4.2	4
Heart disease or abnormal ECG, or both	<0.001	11.8 (7.7 to 42.3)	2.9	3
Syncope during effort	<0.001	17.0 (4.1 to 72.2)	2.8	3
Syncope while supine	0.007	7.6 (1.7 to 33.0)	2.0	2
Precipitating or predisposing factors, or both*	0.01	0.3 (0.1 to 0.8)	-1.1	-1
Autonomic prodromes†	0.02	0.4 (0.2 to 0.9)	0.8	-1

\*Warm-crowded place/prolonged orthostasis/fear-pain-emotion; †nausea/vomiting.



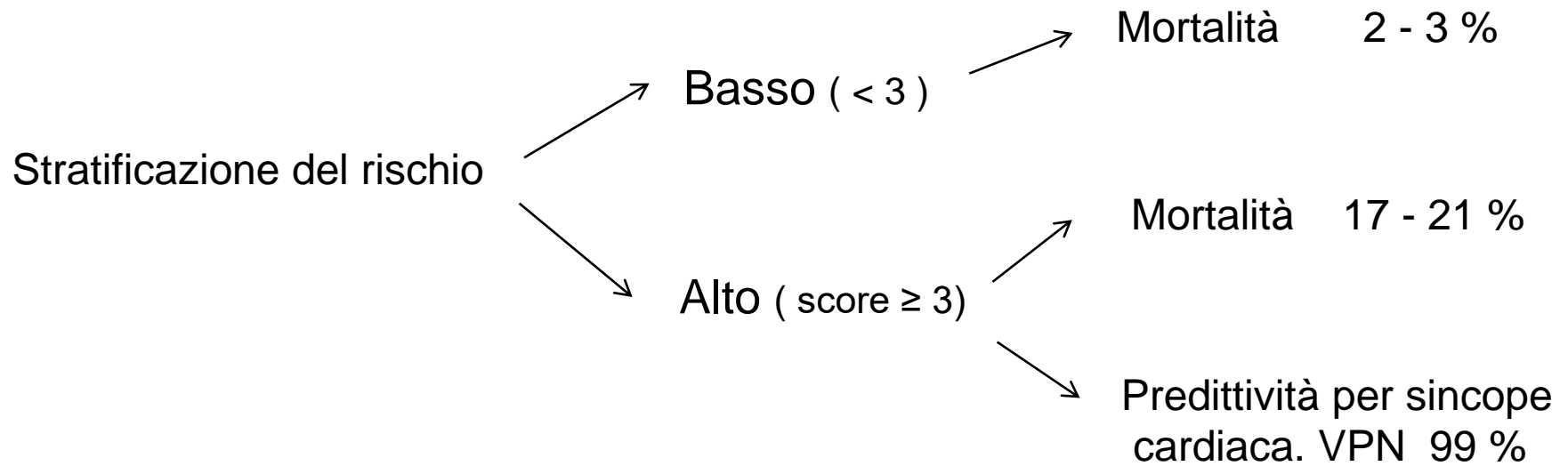
**Patients at risk**

Derivation cohort	134 (52%)	38 (15%)	72 (28%)	16 (6%)
Validation cohort	156 (61%)	41 (16%)	46 (18%)	13 (5%)

**Figure 2** Probability of cardiac syncope according to the EGSYS score in the derivation and validation cohorts.

## The EGSYS Score.

Heart 2008



## The EGSYS Score.

Heart 2008

Conclusioni: L'EGSYS score può aiutare il medico d'urgenza nel processo decisionale, in quanto lo score può essere utilizzato sia come strumento per **valutare la probabilità di sincope cardiaca.**

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## **Gargnano second consensus paper**



### **Syncope clinical management in the Emergency Department: a consensus from the first international workshop on syncope risk stratification in the ED**

**Giorgio Costantino, MD1; Benjamin C. Sun, MD, MPP2; Franca Barbic, MD3; Ilaria Bossi, MD4; Giovanni Casazza, PhD5; Franca Dipaola, MD3; Daniel McDermott, MD6; James Quinn, MD, MS7; Matthew J Reed, MB, MD8; Robert S. Sheldon, MD, PhD9; Monica Solbiati, MD1; Venkatesh Thiruganasambandamoorthy, MBBS, MSc10; Daniel Beach, PhD11; Nicolai Bodemer, PhD12; Michele Brignole, MD13; Ivo Casagrande, MD14; Attilio Del Rosso, MD15; Piergiorgio Duca, MD, PhD5; Greta Falavigna, PhD16; Shamai A. Grossman, MD, MS17; Roberto Ippoliti, PhD18; Andrew D. Krahn, MD19; Nicola Montano, MD, PhD1; Carlos A. Morillo, MD20; Brian Olshansky, MD21; Satish R. Raj, MD, MSCI9; Martin H. Ruwald, MD, PhD22; Francois P Sarasin, MD23; Win-Kuang Shen, MD24; Ian Stiell, MD10; Andrea Ungar, MD25; J. Gert van Dijk, MD, PhD26; Nynke van Dijk, MD, PhD27; Wouter Wieling, MD28; Raffaello Furlan, MD3**

1. Is it syncope?
2. Is there a serious underlying condition identified in the ED?
- 3. If the cause is uncertain, what is the risk of a serious outcome?**
- 4. For a given risk profile, how can these patients be best managed in the ED and what evaluations and functional restrictions are required?**

## The need for risk stratification

- ❑ Some experts felt that more time and a more thorough history could help establish the definite cause of syncope.
- ❑ It was recognized that this is unlikely to take place in the ED, thus leaving a large proportion of patients without a definite syncope diagnosis.
- ❑ **Thus, ED risk-stratification becomes fundamental in the management of these patients.**

## Risk stratification tools

- ❑ As syncope might be the symptom of many different conditions, a clinical decision rule to “rule in” or “rule out” a specific disease is impractical.
- ❑ On the other hand, as the acceptable risk of adverse events varies according to healthcare system, country and medicolegal environments, even a rule aiming at identifying high and low risk patients in order to guide hospital admission cannot be designed in such a way that it can be applied universally.
- ❑ With the input from experts on decision thresholds, clinical decision rules and risk scores, **it was felt that a risk-stratification tool expressing risk as the probability of adverse events would be the most helpful.**



# What are the characteristics for low, intermediate and high risk patients?

## Patient management

Experts agreed on three levels of risks: (depending on the characteristics of both the syncopal episode and the patient)

1. **Low risk:** patients with one or more low risk characteristics and without any high risk characteristics;

*Management:* there was agreement that the patient can be managed as an outpatient in a syncope clinic or syncope unit.

2. **High risk:** patients with at least one high risk characteristic;

*Management:* These patients deserve an intensive diagnostic approach and should be monitored in the ED or in a setting where resuscitation can be performed in case of deterioration.

# What are the characteristics for low, intermediate and high risk patients?

## Patient management

### 3. Patient neither at high, nor at low risk.

- a. patients with comorbidities who would otherwise be at low risk;
- b. patients without any comorbidity whose syncope has some worrisome characteristics itself;
- c. patients without any low or high risk characteristics”.

*Management.* ECG monitoring. ED observation unit ?

**Low risk factors****High risk factors****Characteristics of the patients**

Young age (<40 years)

**Characteristics of syncope**

Only while in standing position

During exertion

Standing from supine/sitting position

In supine position (a)

Nausea/vomiting before syncope

New onset of chest discomfort (a)

Feeling of warmth before syncope

Palpitations before syncope (a)

Triggered by painful/emotionally distressing stimulus

Triggered by cough/defecation/micturition

**Factors present in the history of the patient**

Prolonged history (years) of syncope with the same characteristics of the current episode (a)

Family history of sudden death

Congestive heart failure

Aortic stenosis

Left ventricular outflow tract disease

Dilated cardiomyopathy

Hypertrophic cardiomyopathy

Arrhythmogenic right ventricular cardiomyopathy

Left ventricular ejection fraction <35%

Previously documented arrhythmia (ventricular)

Coronary artery disease (a)

Congenital heart disease (a)

Previous myocardial infarction (a)

Pulmonary hypertension (a)

Previous ICD implantation (a)

**Symptoms, signs or variables associated with the syncopal episode**

Anemia (Hb <9 g/dl) (a)

Lowest systolic blood pressure in the ED <90 mmHg (a)

Sinus bradycardia (<40 bpm) (a)

## ECG features

New (or previously unknown) left bundle branch block

Bifascicular block + first degree AV block

Brugada ECG pattern

ECG changes consistent with acute ischemia

Non sinus rhythm (new) (a)

Bifascicular block (a)

Sick sinus syndrome (a)

Prolonged QTc (>450 msec) (a)

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ICD: Implantable Cardioverter Defibrillator; AV: atrioventricular.

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# **Documento di consenso GIMSI-AcEMC**

## **Gestione della sincope di natura inspiegata dopo la valutazione iniziale in Pronto Soccorso**

**I.Casagranda (chairman), M.Brignole, S.Cencetti, G.  
Cervellin, G.Costantino, R.Furlan, G. Mossini, F.  
Numeroso, M.Pesenti Campagnoni , P. Pinna Parpaglia, A  
Ungar.**

# Raccomandazioni e studi

1- Brignole M, Menozzi C, Bartoletti A, et al. A new management of syncope: prospective systematic guideline-based evaluation of patients referred urgently to general hospitals. *Eur Heart J.* 2006; 27: 76-82.

2- Costantino G, Perego F, Dipaola F, et al. STePS Investigators. Short- and long-term prognosis of syncope, risk factors, and role of hospital admission: results from the STePS (Short-Term Prognosis of Syncope) study. *J Am Coll Cardiol.* 2008; 51: 276-283

3- Vitale E, Maggi R, De Marchi G, Casagrande I, Brignole M. L'approccio al paziente con sincope in pronto soccorso: diagnosi differenziale e stratificazione di rischio. *Emergency Care Journal* 2009; 5: 1-9

4- Ungar A, Del Rosso A, Giada F, et al. Early and late outcome of treated patients referred for syncope to emergency department: the EGSYS 2 follow-up study. *Eur Heart J.* 2010; 31: 2021-6.

5- Numeroso F, Mossini G, Lippi G, Cervellin G. Evaluation of the current prognostic role of cardiogenic syncope. *Intern Emerg Med.* 2013; 8: 69-73.

# Raccomandazioni e studi

- 6- Sun BC, Costantino G, Barbic F et al. Priorities for emergency department syncope research. *Ann Emerg Med* 2014; 64: 649-655
  
- 7- Numeroso F, Mossini G, Lippi G, Cervellin G. Evaluation of the current prognostic role of heart diseases in the history of patients with syncope. *Europace*. 2014; 16: 1379-1383
  
- 8- Numeroso F, Mossini G, Giovanelli M, Lippi G, Cervellin G. Short term prognosis and actual management of patients with intermediate-risk syncope. Results from the IRiS (Intermediate-Risk Syncope) Study. (*in press*)
  
- 9- Ungar A, Tesi F, Chisciotti VM, et al. Assessment of a novel management pathway for patients referred to the Emergency Department for syncope: results in a Tertiary Hospital. *Europace* 2015 (*in press*)
  
- 10- Costantino G, Sun B, Barbic F et al. Syncope clinical management in the Emergency Department: a consensus from the first international workshop on syncope risk stratification in the ED. 2015 (*In press*)

**Scopo di questo documento è di definirne percorsi e gestione del paziente con sincope **di natura inspiegata** dopo valutazione iniziale in Pronto Soccorso. Tutti i pazienti con episodio sincopale che hanno una diagnosi di verosimile certezza dopo la valutazione iniziale in Pronto Soccorso, anche quelli ad alto rischio, **non sono inclusi in questo documento.****



## Quali pazienti per questo documento?

**1-** La PdCT è sintomo prevalente di accesso al PS ?

SI'

**2-** La diagnosi rimane inspiegata in PS ?

SI'

**3-** Segui le raccomandazioni del Documento di Consenso AcEMC-GIMSI

NO

La PdCT è uno dei sintomi di malattia organica acuta

Percorso della malattia principale

NO

La diagnosi è certa

Terapia appropriata

# Definizione di Syncope Unit e Funzioni

**La Syncope Unit (SU) è una struttura funzionale il cui compito è quello di**  
:

- 1) fornire un approccio standardizzato per la diagnosi e la gestione delle perdite transitorie di coscienza (T-LOC) e dei relativi sintomi, con uno staff dedicato e con la possibilità di accedere alla diagnostica secondo un percorso facilitato e di fornire le corrette indicazioni terapeutiche.
- 1) La SU dovrebbe inoltre farsi promotrice della formazione dei clinici che hanno a che fare con la gestione della sincope

# Collocazione della Syncope Unit

**La Syncope Unit opera all'interno della struttura ospedaliera:**

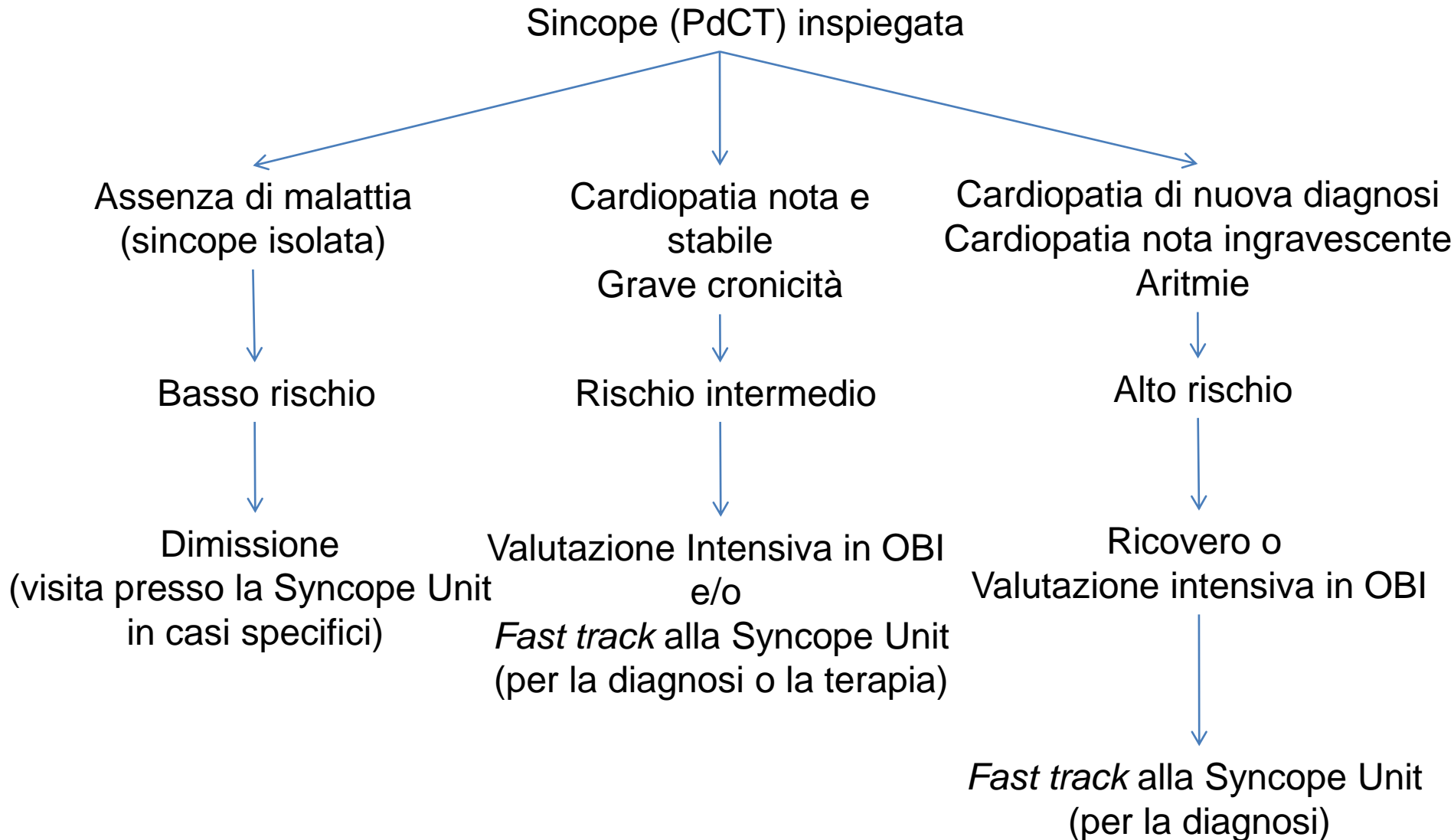
- All'esterno del Dipartimento di Emergenza (Cardiologia, Medicina Interna, Geriatria)
- Nel Dipartimento di Emergenza

In letteratura sono descritti alcuni esempi di Syncope Unit in DEA .

In tutti l'elemento caratterizzante è la presenza di una **Unità di**

**Osservazione**

# Percorso diagnostico della sincope (PdCT) inspiegata dopo valutazione iniziale in DEA



When the cause of syncope remains uncertain after initial evaluation the next step is to assess the risk of major cardiovascular events or SCD.

### Short-term high risk criteria which require prompt hospitalization or intensive evaluation

**Severe structural or coronary artery disease** (heart failure, low LVEF, or previous myocardial infarction)

### Clinical or ECG features suggesting arrhythmic syncope

- Syncope during exertion or supine
- Palpitations at the time of syncope
- Family history of SCD
- Non-sustained VT
- Bifascicular-block (LBBB or RBBB combined with left anterior or left posterior fascicular block) or other intraventricular conduction abnormalities with QRS duration  $\geq 120$  ms
- Inadequate sinus bradycardia ( $< 50$  bpm) or sinoatrial block in absence of negative chronotropic medications or physical training
- Pre-excited QRS complex
- Prolonged or short QT interval
- RBBB pattern with ST-elevation in leads V1–V3 (Brugada pattern)
- Negative T waves in right precordial leads, epsilon waves, and ventricular late potentials suggestive of ARVC

### Important co-morbidities

- Severe anaemia
- Electrolyte disturbance

## ***Raccomandazioni di consenso***

### **Equipaggiamento, test e funzioni necessarie per la gestione intensiva della sincope inspiegata in O.B.I.**

<b>Monitoraggio ECG e pressorio</b>	Acquisire e tenere in memoria per 24 ore il monitoraggio ECG e di pressione arteriosa intermittente non invasiva (NIP) (*)
<b>Standing test</b>	Test dell'ortostatismo con misurazione di pressione arteriosa intermittente non invasiva (NIP) (*)
<b>Massaggio del seno carotideo</b>	Possibilità di eseguire il massaggio del seno carotideo in clino ed ortostatismo durante monitoraggio ECG e pressorio secondo il "Metodo dei Sintomi" (Linee guida ESC) (**) nei soggetti >50 anni , quando indicato
<b>Ecocardiogramma</b>	Ottenere un esame ecocardiografico, quando indicato
<b>Esami ematochimici</b>	Eseguire esami ematochimici, quando indicato
<b>Syncope Expert</b>	Avere la disponibilità di consulenza (***) da parte di un medico Esperto in Sincope e attivazione di protocollo condiviso di <i>fast track</i> verso l'ambulatorio sincope o la Syncope Unit
<b>Consulenze specialistiche</b>	Avere la disponibilità di consulenza (***) specialistica neurologica, psichiatrica, geriatrica, cardiologica

## Conclusioni

La stratificazione del rischio è elemento fondamentale nella gestione della sincope di natura indeterminata in PS.

L' OBI può esercitare una funzione chiave all'interno della Syncope Unit.

E' necessario condurre degli studi multicentrici per definire quali pazienti possano trovare reale giovamento dalla permanenza in OBI

