ACVC
Association for
Acute CardioVascular Care

Edition 2025

CLINICAL DECISION MAKING TOOLKIT

Instant guidance for diagnosis, risk stratification and management

ESC
European Society
of Cardiology

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Acute CardioVascular Care

The Clinical Decision Making Toolkit

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Clinical Decision-Making TOOLKIT

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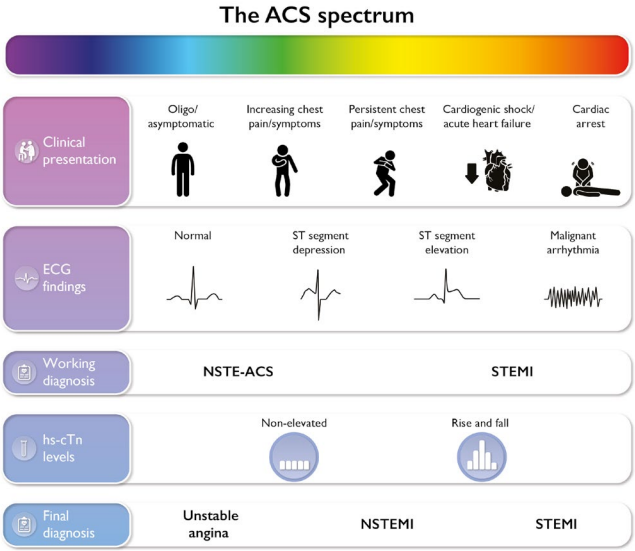
KEY SYMPTOMS

Initial assessment of patients with ACUTE CHEST PAIN



Reference: 2023 ESC Guidelines for the management of acute coronary syndromes European Heart Journal, Volume 44, Issue 38, 7 October 2023, Pages 3720–3826 Figure 2

Causes of ACUTE CHEST PAIN

Primary cardiovascular	Primary non-cardiovascular

• Acute coronary syndromes
  * ST segment elevation myocardial infarction (STEMI)
  * Non-ST segment elevation myocardial infarction (NSTEMI)
  * Unstable angina
• Acute aortic syndrome
• Pulmonary embolism, pulmonary infarction
• Severe acute heart failure
• Tachyarrhytmias
• Severe hypertensive crisis
• Aortic stenosis, hypertrophic cardiomyopathy
• Acute pericarditis, pericardial effusion
• Acute myocarditis
• Stress cardiomyopathy (Takotsubo syndrome)
• Cardiac contusion
	• Pneumonia, bronchitis, acute asthma
	• Pleuritis, pleural effusion, pneumothorax
	• Peptic ulcer disease, pancreatitis, cholecystitis
	• Oesophageal spasm, oesophagitis, gastroesophageal reflux (GER)
	• Thoracic trauma
	• Costochondritis, rib fracture
	• Cervical/thoracic vertebral or discal damage
	• Herpes zoster
	• Psychogenic

Factors to be considered in the evaluation after the first call for ACUTE CHEST PAIN

First call for chest pain	Higher death risk / probability for ACS	Lower death risk / probability for ACS
Arguments for vital risk	• Cardiorespiratory arrest, syncope/ loss of consciousness, neurological defect • Dyspnoea (see chapter 1.2) • Arrhythmias – tachycardia	• Normal consciousness • Normal breathing • Normal heart rhythm
Context, CV risk	• Age >40 years • Previous CV disease (MI, stroke, PE) • Modifiable CV risk factors (smoker, HTN, hypercholesterolemia, diabetes) • Chronic CV treatment	• Age <40 years • No previous CV disease • No CV risk factors • No chronic treatment • Hypertermia
Chest pain characteristics	• Location: Medial/lateral, retrosternal • Irradiation: jaw, neck, arm, back • Intensity: high • Duration: prolonged (> 20 min) • Associated symptoms: dyspnoea, sweating, lightheadedness, nausea • Trigger: exertion/spontaneous	• Location: variable • Irradiation: lateral, abdominal • Intensity: variable • Duration: short (< 1min) • Associated symptoms: no neurovegetative symptoms • Trigger: depends on position, palpation or movements

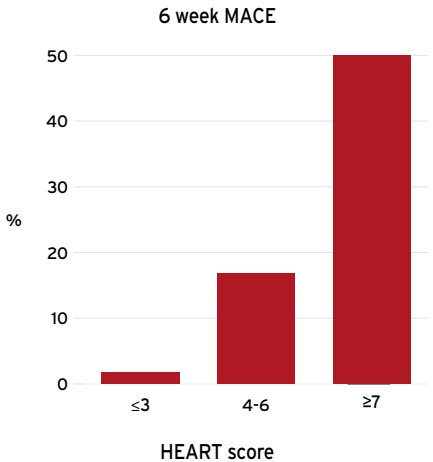
High-risk criteria for ACUTE CHEST PAIN suggestive of ACS

Symptoms	Prolonged ongoing chest pain (≥20 minutes)
History	• Prior PCI in the last 6 months • Prior CABG • CV risk factors (HTN, DM, smoking, older age)
Clinical findings	• Pulmonary oedema most likely due to ischaemia • Hypotension • Tachycardia • New mitral regurgitation murmur • Acute heart failure (Killip class >1) • New systolic murmur at Erb's point
ECG	• Dynamic ST changes >0.5 mm during chest pain • New or presumably new left or right bundle branch block • Sustained ventricular tachycardia • High degree atrioventricular block
Biomarkers	• Elevated cardiac troponins
Score	• GRACE risk score ≥140 • HEART score ≥7

Reference: Diagnosis and risk stratification of chest pain patients in the emergency department: focus on acute coronary syndromes
European Heart Journal. Acute Cardiovascular Care, Volume 9, Issue 1, 1 February 2020, Pages 76–89 table 2

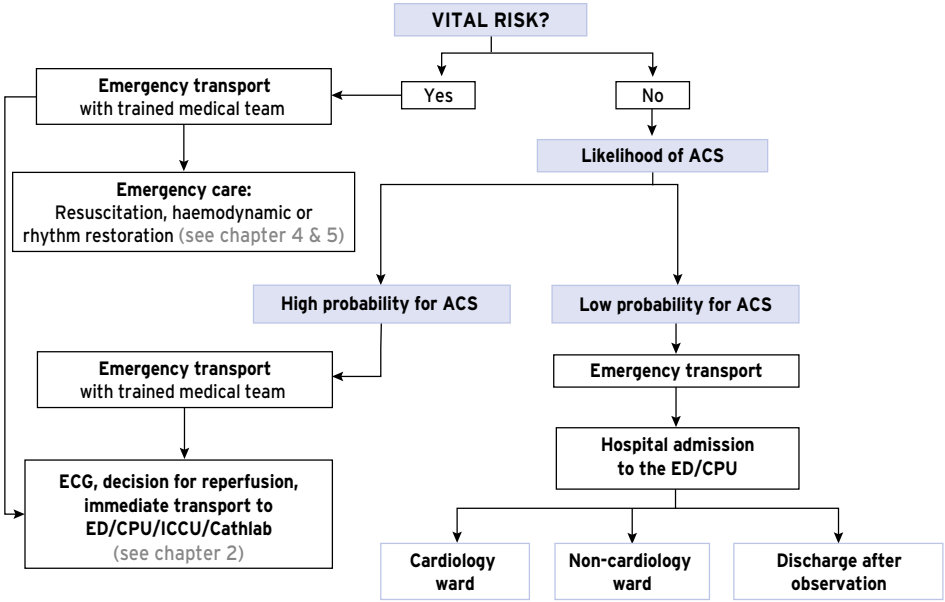
High-risk criteria for ACUTE CHEST PAIN suggestive of ACS

HEART SCORE	
History	2 = Highly suspicious 1 = Moderately suspicious 0 = Slightly or non-suspicious
ECG	2 = Significant ST-depression 1 = Nonspecific repolarization disturbance 0 = Normal
Age	2 = ≥65 years 1 = ≥45 <65 years 0 = <45 years
Risk factors	2 = ≥3 or history of atherosclerotic disease 1 = 1 or 2 0 = no risk factors known
Troponin	2 = ≥3x upper limit 1 = 1x – 3x upper limit 0 = ≤ upper limite
LOW RISK	HEART score ≤3



Reference: Diagnosis and risk stratification of chest pain patients in the emergency department: focus on acute coronary syndromes. European Heart Journal. Acute Cardiovascular Care, Volume 9, Issue 1, 1 February 2020, Pages 76–89 figure 2

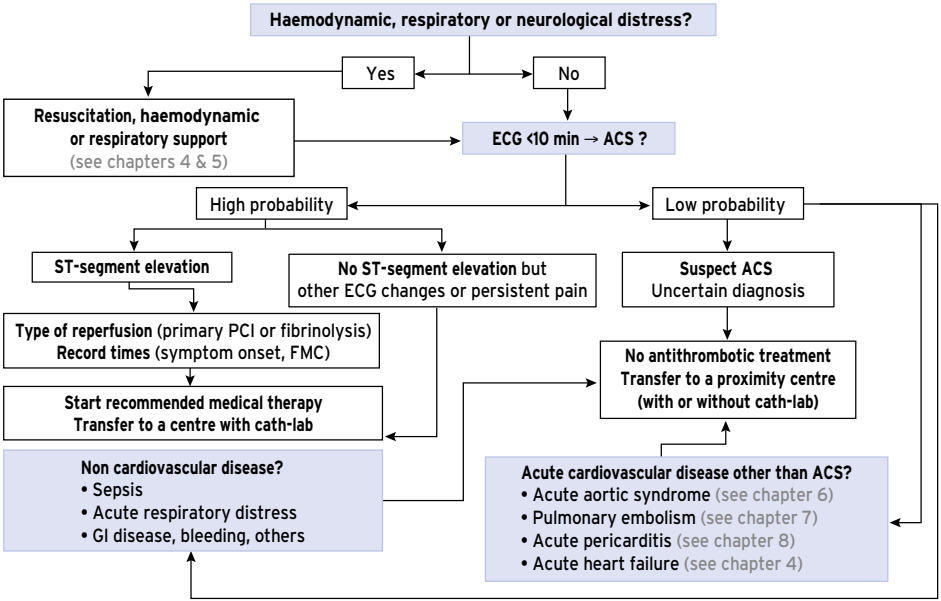
Approach after first call for out-of-hospital ACUTE CHEST PAIN



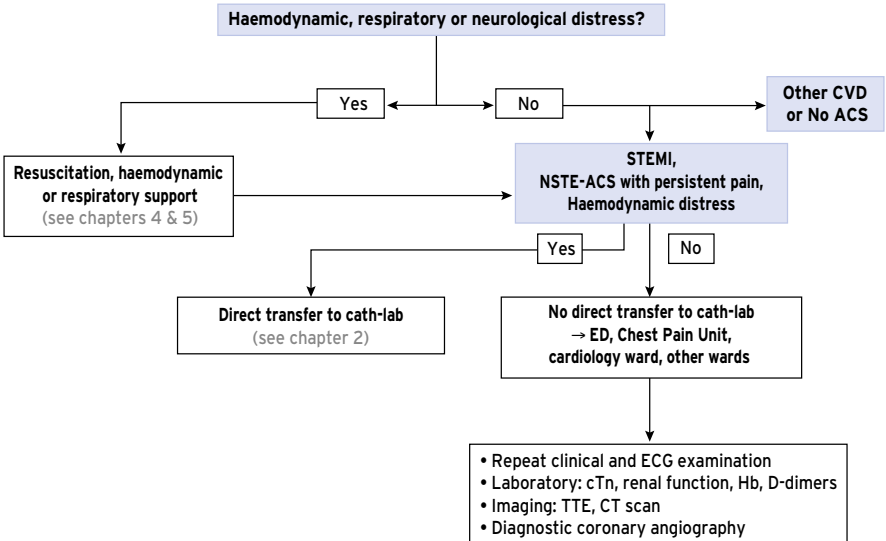
Factors to be considered in the evaluation during the first medical contact for ACUTE CHEST PAIN

First medical contact	Higher death risk / probability for ACS	Lower death risk / probability for ACS
Haemodynamic, respiratory, neurological distress	• Cardiopulmonary arrest, hypotension, tachycardia, shock • Dyspnoea, hypoxemia, Lung rales (Killip class >= 2) • ECG: ST-segment deviation	• Normal consciousness, no motion defects • Normal HR and BP • Normal breathing and SpO_2, no loss of pulse
Probability for ACS	• Context, typical symptoms consistent with myocardial ischemia • ECG changes • Hs cTn	• No CV risk, atypical symptoms, normal ECG • Negative hs cTn only if onset of pain >3 hours (see chapter 2.1)
STEMI NSTE-ACS Uncertain diagnosis (see chapter 2.1)	**ECG criteria for STEMI ST depression or normal ECG**	**Normal ECG** (repeat 12-lead ECG recording if symptoms persist/recur) **Other ST-segment abnormalities**
Type of reperfusion	• **Primary PCI or thrombolysis?** Primary PCI if delay <120 min (preferably <90 min) or <60 min if onset of pain <120 min Consider age, anterior wall location	• Primary PCI between 12-48 hours in patients with ongoing ischemia, symptoms or clinical/haemodynamic or electrical instability
Time assessment	• **Relevant times:** Symptom onset, first medical contact (FMC). FMC → ECG/diagnosis; FMC → PCI; FMC → thrombolysis	• No reperfusion if delay >12 hours and stable, asymptomatic, without ST-segment elevation

First medical contact in patients with ACUTE CHEST PAIN (home-ambulance)



Management of patients with ACUTE CHEST PAIN (emergency room)



DYSPNOEA: Differential diagnosis

Up to 50% have ≥2 diagnoses, which may result in acute respiratory failure*!

Basic measures

- BP, HR, respiratory rate, SpO_2 & temperature
- Start oxygen to target SpO_2 (90-92% in COPD)
- Start i.v. line & monitor patient arterial blood gas

Criteria for transfer to ICU
(despite treatment for 30 minutes)

- Respiratory rate >35/min
- SpO_2 <85%
- SBP <90 mmHg
- HR >120 bpm

- **ECG**
- **Chest X-ray**
- **Blood count**
- **D-Dimers if low-intermediate probability of PE**
- **BNP/NT-proBNP**
- **Venous BG**
- **Troponin**

Acute heart failure
(see chapter 4)

Acute coronary syndrome
(see chapter 2)

Pneumonia

Exacerbated COPD or other chronic lung disease

Pulmonary embolism
(see chapter 7)

Other causes, including

- Asthma
- Severe sepsis
- Tumor
- Pneumothorax
- Pleural effusion/ascites
- Anxiety disorder
- Anemia
- Bronchitis
- Metabolic acidosis
- Neurologic disease

* Defined as ≥1 criterion:

- Respiratory rate ≥25/min
- PaO_2 ≤75 mmHg
- SpO_2 ≤92% in ambient air
- $PaCO_2$ ≥45 mmHg with arterial pH ≤7.35

DYSPNOEA: Acute heart failure (see chapter 4.1)

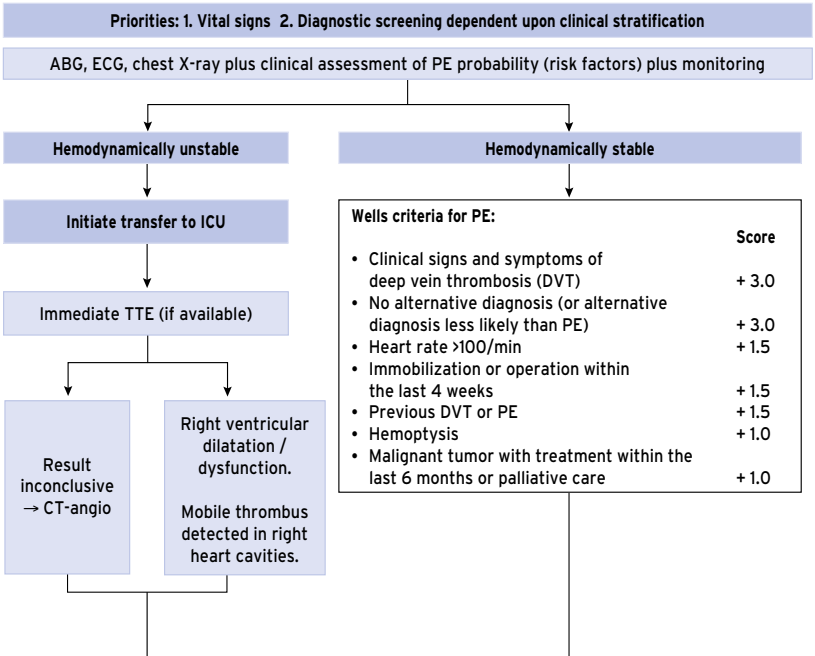
BASIC WORK-UP

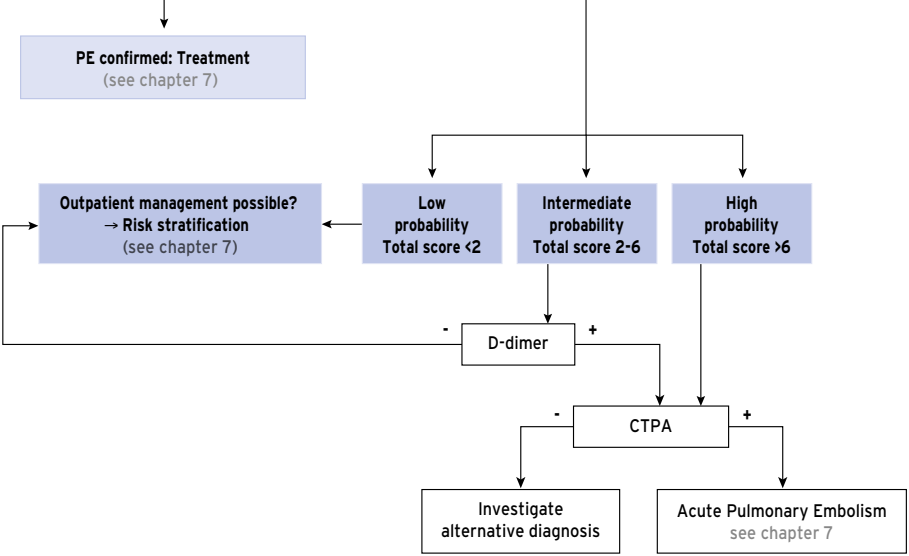
- **Immediate 12-lead ECG, cardiac monitor, BP, respiratory rate, pulse oximetry**
- **Clinical findings**
  Clinical findings: lower extremity oedema, jugular venous distension, rales
- **Laboratory findings**
  Complete blood count, chemistries, cardiac enzymes, BNP,NT-proBNP, TSH, VBGA
- **Chest X-ray +/- lung ultrasound**
- **Echocardiogram**
  Within 24h (immediately if in shock)
- **Coronary angiography**
  If ACS or ventricular arrhythmias (emergent) or persistent angina (delayed). Consider in patients with intermediate-to-high pre-test probability of CAD

• **Positioning**	Keep head of bed elevated above level of legs
• **Oxygen**	Up to 12 l/min via rebreather mask, titrate oxygen saturation to 94%
• **Furosemide**	40-120 mg i.v. (adjust based on kidney function and clinical findings; monitor creatinine)
• **Nitroglycerin**	Tablets, sublingual spray, patches or iv according to local protocols. In pulmonary oedema with severe shortness of breath: NTG drip - Check BP after 5 and 10 min - Increase dose until symptom relieve as long as SBP >90 mmHg - Additional BP check 5 and 10 min after each increase in dosing - Check BP every 20 min once a steady drip rate is reached
• **Heart rate control**	IV Digoxine (0.75 – 1.0 mg) +/- low dose oral betablocker in patients with atrial fibrillation and ventricular rate >120/min
• **Anticoagulation**	Therapeutic dosing in ACS and atrial fibrillation: Enoxaparin 1 mg/kg body weight as 1st dose in patients with ACS (see chapter 2) or atrial fibrillation (see chapter 5.2)


Unstable after 30 minutes
CCU/ICU transfer
Stable after 30 minutes
Ward transfer

DYSPNOEA: Acute pulmonary embolism (see chapter 7)




PE confirmed: Treatment
(see chapter 7)
Outpatient management possible?
→ Risk stratification
(see chapter 7)
Low probability
Total score <2
Intermediate probability
Total score 2-6
High probability
Total score >6
-
D-dimer
+
-
CTPA
+
Investigate alternative diagnosis
Acute Pulmonary Embolism
see chapter 7

DYSPNOEA: COPD exacerbation

- **Verify diagnosis (DD: PE, acute heart failure, pneumothorax)**
- **Oxygen administration → SpO_2 target 88-92% (Beware of carbonarcosis: ABC after 1 h)**

Definition:
Known COPD and/or
- Progressive dyspnea and/or
- Change in quantitiy and color of sputum and/or
- Heavy coughing

→ • COPD classification (GOLD)

→ • Etiology

- History, clinical examination (blood pressure, pulse, oxygen saturation, vigilance)

↓

- Laboratory findings: Blood count, coagulation, ProCT, perhaps BNP
- Chest X-ray; ECG (exclusion of differential diagnoses)
- Sputum cultures (always in case of hospitalisation or previous outpatient antibiotic treatment)

→ • Hospitalisation indicated?

→ • Evaluate ICU criteria
• NIV indicated?

↓

- **Oxygen therapy** 2-(4) l; target saturation 90%
- **Salbutamol/ipratropium inhalations** ≥4-6 x/d, if needed long-term inhalation
- **Systemic steroids** prednisone 0.5 mg/kg of body weight for 5 days
- Antibiotic treatment should be considered; always indicated in stage Gold IV
- Physiotherapy

→ • Follow-up

DYSPNOEA: Community-acquired pneumonia

Objective: diagnostics, risk stratification & empirical immediate treatment <2(-4) hours

Definition

• Chest X-ray or low-dose CT	if dyspnoea & cough
• Laboratory workup	clinical chemistry; BGA; procalcitonin
• Sputum	if patient admitted
• Blood cultures (2x2)	if patient admitted
• Legionella antigen (urine)	if Legionellosis suspected
• Pneumococcus antigen (urine)	if no other pathogen isolated

Risk stratification → manageable on an outpatient basis?
- Pneumonia Severity Index
- CURB-65

- Treatment; procalcitonin-guided treatment
- Consider outpatient treatment where PSI I-III or CURB65 0 or 1
- Minimum 5-day course of treatment and afebrile for 48-72h, 7-10 days, 14 days where intracellular organisms (e.g. Legionella) are present

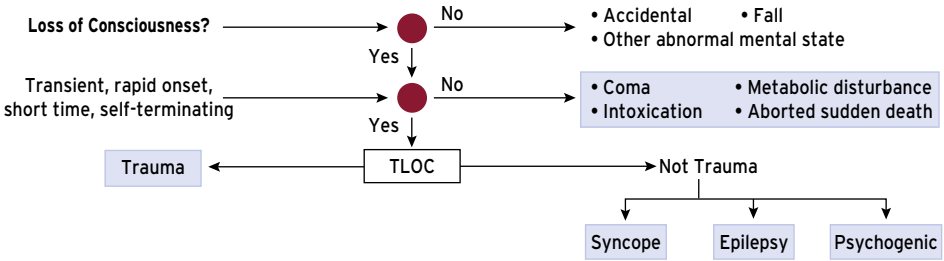
Complications

SYNCOPE: Assessment of patients with transient loss of consciousness (TLOC)

Syncope is defined as a transient loss of consciousness due to global cerebral hypoperfusion characterised by rapid onset, short duration, spontaneous and complete recovery.

The differentiation between syncope and non-syncopal conditions with real or apparent LOC can be achieved in most cases with a detailed clinical history but sometimes can be extremely difficult.
The following questions should be answered:
- Was LOC complete?
- Was LOC transient with rapid onset and short duration?
- Did the patient recover spontaneously, completely and without sequelae?
- Did the patient lose postural tone?

If the answers to these questions are positive, the episode has a high likelihood of being syncope. If the answer to one or more of these questions is negative, exclude other forms of LOC before proceeding with syncope evaluation.



SYNCOPE: Diagnostic criteria (1)
Diagnostic criteria with initial evaluation

Vasovagal syncope is diagnosed if syncope is precipitated by emotional distress or orthostatic stress and is associated with typical prodrome.

Situational syncope is diagnosed if syncope occurs during or immediately after specific triggers.

Orthostatic syncope is diagnosed when it occurs after standing up and there is documentation of orthostatic hypotension, and when there are one or more episodes of daytime systolic hypotension < 90 mm Hg with ambulatory blood pressure monitoring.

Arrhythmia related syncope is diagnosed by ECG when there is:

- Persistent sinus bradycardia <40 bpm in awake or repetitive sinoatrial block or sinus pauses >3 s
- Mobitz II or 3rd degree AV block
- Alternating left and right BBB
- VT or rapid paroxysmal SVT
- Non-sustained episodes of polymorphic VT and long or short QT interval
- Pacemaker or ICD malfunction with cardiac pauses

Cardiac ischemia related syncope is diagnosed when syncope presents with ECG evidence of acute ischemia with or without myocardial infarction.

Cardiovascular syncope is diagnosed when syncope presents in patients with prolapsing atrial myxoma, severe aortic stenosis, pulmonary hypertension, pulmonary embolus or acute aortic dissection.

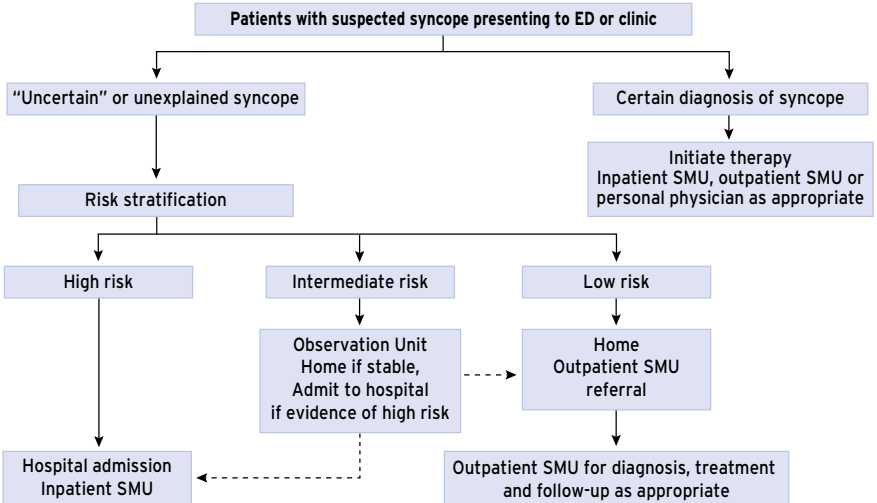
Reference: Moya A et al. Eur Heart J(2009) 30, 2631-2671 (1).

SYNCOPE: Definition of risks

Intermediate risk	High risk
• No clear warning symptoms • No warning symptoms or short prodrome • The following ECG changes: - Persistent sinus bradycardia - Bundle branch block or intraventricularconduction disturbances - Ventricular hypertrophy - Mobitz I AV block - Asymptomatic sinus bradycardia - Paroxysmal supraventricular tachycardia or atrial fibrillation - Atypical Brugada pattern - Pre-excited QRS complex	• Syncope during exertion or preceded by palpitations, chest pain or breathlessness • Presence of severe structural or coronary artery disease, heart failure, low left ventricular ejection fraction • Persistent low systolic blood pressure (< 90 mmHg) • The following ECG abnormalities: - ECG changes consistent with acute ischemia - Mobitz II or 3rd degree AV block - sinus pauses > 3 sec - sustained or non-sustained ventricular tachycardia - Type I Brugada pattern • Dysfunction of an implanted cardiac device (pacemaker or ICD) • Family history of sudden death at young age • QTc > 460 ms • Negative T waves in right precordial leads and epsilon waves suggestive or arrhythmogenic right ventricular cardiomyopathy

SYNCOPE: Evaluation and risk stratification of patients with suspected syncope

Once syncope is considered to be the likely diagnosis, risk stratification is required to determine further management.



Copyright: Sutton R, Brignole M, Benditt DG. Key challenges in the current management of syncope. Nat Rev Cardiol. (2012); (10):590-8.

SYNCOPE: Diagnostic criteria (2)
Diagnostic criteria with provocation maneuvers

Carotid sinus massage	Orthostatic Hypotension
Indications • CSM is indicated in patients >40 years with syncope of unknown aetiology after initial evaluation; • CSM should be avoided in patients with previous MI, TIA or stroke within the past 3 months and in patients with carotid bruits (except if carotid Doppler studies excluded significant stenosis)	**Recommendations: Active standing Indications** • Manual intermittent determination with sphygmomanometer of BP supine and, when OH is suspected, during active standing for 3 min is indicated as initial evaluation; • Continuous beat-to-beat non-invasive pressure measurement may be helpful in cases of doubt
Diagnostic criteria • CSM is diagnostic if syncope is reproduced in presence of asystole longer than 3 s and/or a fall in systolic BP >50 mmHg	**Diagnostic criteria** • The test is diagnostic when there is a symptomatic fall in systolic BP from baseline value ≥20 mmHg or diastolic BP ≥10 mmHg or a decrease in systolic BP to <90 mmHg; • The test should be considered diagnostic when there is an asymptomatic fall in systolic BP from baseline value ≥20 mmHg or diastolic BP >10 mmHg or a decrease in systolic BP to <90 mmHg

Reference: Moya A et al. Eur Heart J(2009) 30; 2631-2671 (2).

Treatment according to type of SYNCOPE (1)

Treatment of reflex syncope	Treatment of orthostatic hypotension
• Explanation of the diagnosis, provision of reassurance and explanation of risk of recurrence are in all patients • Isometric PCM are indicated in patients with prodrome • Cardiac pacing should be considered in patients with dominant cardioinhibitory CSS • Cardiac pacing should be considered in patients with frequent recurrent reflex syncope, age >40 years and documented spontaneous cardioinhibitory response during monitoring • Cardio neuroablation may be considered in young patients with recurrent refkex syncope and documented cardiac pauses during monitoring, dominant cardioinhibitory CSS or cardioinhibitory positive tilt test • Midodrine may be indicated in patients with VVS refractory to lifestyle measures • Tilt training may be useful for education of patients but long-term benefit depends on compliance • Cardiac pacing may be indicated in patients with tilt-induced cardioinhibitory response with recurrent frequent unpredictable syncope and age >40 after alternative therapy has failed • Triggers or situations inducing syncope must be avoided as much as possible • Hypotensive drugs must be modified or discontinued • Cardiac pacing is not indicated in the absence of a documented cardioinhibitory reflex • Beta-adrenergic blocking drugs are not indicated • Fluid consumption and salt in the diet should be increased	• Adequate hydration and salt intake must be maintained • Midodrine should be administered as adjunctive therapy if needed • Fludrocortisone should be administered as adjunctive therapy if needed • PCM may be indicated • Abdominal binders and/or support stockings to reduce venous pooling may be indicated • Head-up tilt sleeping (>10°) to increase fluid volume may be indicated • Triggers or situations inducing syncope must be avoided as much as possible • Hypotensive drugs administered for concomitant conditions must be discontinued or reduced

Copyright: Moya A et al. Eur Heart J(2009) 30; 2631–2671 (3).

Treatment according to type of SYNCOPE (2)

Treatment of arrhythmic syncope

Cardiac Pacing

- Pacing is indicated in patients with sinus node disease in whom syncope is demonstrated to be due to sinus arrest (symptom-ECG correlation) without a correctable cause
- Pacing is indicated in sinus node disease patients with syncope and abnormal CSNRT
- Pacing is indicated in sinus node disease patients with syncope and asymptomatic pauses >3 sec. (with possible exceptions of young trained persons, during sleep and in medicated patients)
- Pacing is indicated in patients with syncope and 2nd degree Mobitz II, advanced or complete AV block
- Pacing is indicated in patients with syncope, BBB and positive EPS
- Pacing should be considered in patients with unexplained syncope and BBB
- Pacing may be indicated in patients with unexplained syncope and sinus node disease with persistent sinus bradycardia itself asymptomatic
- Pacing is not indicated in patients with unexplained syncope without evidence of any conduction disturbance

Catheter ablation

- Catheter ablation is indicated in patients with symptom/ arrhythmia ECG correlation in both SVT and VT in the absence of structural heart disease (with exception of atrial fibrillation)
- Catheter ablation may be indicated in patients with syncope due to the onset of rapid atrial fibrillation

Antiarrhythmic drug therapy

- Antiarrhythmic drug therapy, including rate control drugs, is indicated in patients with syncope due to onset of rapid atrial fibrillation
- Drug therapy should be considered in patients with symptom/ arrhythmia ECG correlation in both SVT and VT when catheter ablation cannot be undertaken or has failed

Implantable Cardioverter Defibrillator (ICD)

- ICD is indicated in patients with documented VT and structural heart disease
- ICD is indicated when sustained monomorphic VT is induced at EPS in patients with previous myocardial infarction
- ICD should be considered in patients with documented VT and inherited cardiomyopathies or channelopathies

Copyright: Moya A et al. Eur Heart J(2009) 30; 2631-2671 (4).

Abbreviations

APTT = Activated partial thromboplastin time
AB = Airway and breathing
ABG = Arterial blood gas
AADs = Antiarrhythmic drugs
AAS = Acute aortic syndrome
ACEI = Angiotensin converting enzyme inhibitor
ACLS = Advanced cardiovascular life support
ACS = Acute coronary syndrome
ACT = Activated clotting time
AD = Aortic Dissection
AED = Automated external defibrillator
AF = Atrial fibrillation
ANA = Antinuclear antibodies
Ao = Aortic
aPTT = Activated partial thromboplastin time
ARB = Angiotensin receptor blockers
AS = Aortic stenosis
AV = Atrioventricular
AVB = Atrioventricular conduction block
AVN = Atrioventricular node
AVNRT = Atrioventricular nodal re-entrant tachycardia
AVNT = Atrioventricular nodal tachycardia
BID = Twice a day
BBB = Bundle branch block
BLS = Basic life support
BNP = Brain natriuretic peptide
BP = Blood pressure
CABG = Coronary artery bypass grafting
CAD = Coronary artery disease
Cath Lab = Catheterisation laboratory
CCB = Calcium channel blockers
CCU = Coronary care unit
CHF = Congestive heart failure
CMR = Cardiovascular magnetic resonance
COPD = Chronic obstructive pulmonary disease
CPAP = Continuous positive airway pressure
CPR = Cardiopulmonary resuscitation
Cr = Creatinine blood level (mg/dL)
CrCl = Creatinine clearance
CRP = C-reactive protein
CS = Cardiogenic shock
CSM = Carotid sinus massage
CSNRT = Corrected sinus node recovery time

Abbreviations (Cont.)

CSS = Carotid sinus syndrome
CT = Computed tomography
CT-angio = Computed tomography angiography
cTn = Cardiac troponin
CUS = Compression venous ultrasound
CV = Cardiovascular
CVA = Cerebrovascular accident
CXR = Chest X-ray
DAPT = Dual antiplatelet therapy
DD = Dyastolic dysfunction
DM = Diabetes mellitus
dTT = Diluted thrombin time
DVT = Deep vein thrombosis
ECG = Electrocardiogram
Echo = Echocardiogram
ECMO = Extracorporeal membrane oxygenation
ECT = Ecarin clotting time
ED = Emergency department
EF = Ejection fraction
EG = Electrograms
eGFR = Estimated glomerular filtration rate (ml/min/1.73 m^2)
EMB = Endomyocardial biopsy
EMS = Emergency medical services
EPS = Electrophysiological study
ERC = European Resuscitation Council
ESR = Erythrocyte sedimentation rate
ETT = Exercice treadmill testing
FFP = Fresh frozen plasma
FMC = First medical contact
GER = Gastroesophageal reflux
GFR = Glomerular flow rate
GI = Gastrointestinal
GP = Glycoprotein
Hb = Haemoglobin
HF = Heart failure
HIT = Heparin-induced thrombocytopenia
HOCM = Hypertrophic obstructive cardiomyopathy
HTN = Hypertension
HR = Heart rate
hsTn = High-sensitive troponin
IABP = Intra-aortic balloon pump
ICC = Intensive cardiac care
ICCU = Intensive cardiac care unit

Abbreviations (Cont.)

ICD = Implantable cardioverter defibrillator
ICI = Immune checkpoint inhibitors
IHD = Ischemic heart disease
IMH = Intramural hematoma
IRF = Immediate-release formulation
ISFC = International Society and Federation of Cardiology
i.o. = Intraosseous
IV = Invasive ventilation
i.v. = Intravenous
KD = Kidney disease
LBBB = Left bundle branch block
LD = Loading dose
LGE = Late gadolinium enhancement
LMWH = Low-molecular weight heparin
LOC = Loss of consciousness
LV = Left ventricular
LVAD/Bi-AD = left ventricular, bi-ventricular assist device
LVD = Left ventricular dysfunction
LVEF = Left ventricular ejection fraction
LVH = Left ventricular hypertrophy
LVSD = Left ventricular systolic dysfunction
MCS = Mechanical circulatory support
MD = Maintenance dose
MDCT = Computed tomography with >4 elements
MI = Myocardial infarction
MRA = Mineralocorticoid receptor antagonist
MRI = Magnetic resonance imaging
Mvo = Microvascular obstruction
NIV = Non-invasive ventilation
NOAC = New oral anticoagulants
NSAID = Non-steroidal anti-inflammatory drugs
NSVT = Non-sustained ventricular tachycardia or recurrent
NSTE-ACS = Non ST-segment elevation acute coronary syndrome
NSTEMI = Non ST-segment elevation myocardial infarction
NTG = Nitroglycerin
NT-proBNP = N-terminal pro brain natriuretic peptide
NVAF = Non-valvular atrial fibrillation
NYHA = New York Heart Association

OH = Orthostatic hypotension
PAP = Pulmonary arterial pressure
PAU = Penetrating aortic ulcer
PCI = Percutaneous coronary intervention
PCM = Physical counter-measures
PCP = Pulmonary capillary pressure
PE = Pulmonary embolism
PEA = Pulmonary endarterectomy
PEEP = Positive end expiratory pressure
PPC = Prothrombin complex concentrate
PR = Pulmonary regurgitation
PRECISE-DAPT = PREdicting bleeding Complications In patients undergoing Stent implantation and subsEquent Dual Anti Platelet Therapy
PRF = Prolonged-release formulation
ProCT = Procalcitonin
PRN = Pro re nata
PS-PEEP = Pressure support-positive end-expiratory pressure
PSVT = Paroxysmal supraventricular tachycardia
QD = Once a day
QPM = Every evening
rFVIIa = Recombinant factor VIIa
rtPA = Recombinant tissue plasminogen activator
RV = Right ventricular
RVOT-VT = Right ventricular outflow tract ventricular tachycardia
SBP = Systemic blood pressure
s.c = Subcutaneous
SIRS = Systemic inflammatory response syndrome
SLE = Systemic lupus erythematosus
SMU = Syncope management units
STE-ACS = ST-segment elevation acute coronary syndrome
STEMI = ST-segment elevation myocardial infarction
SVT = Supraventricular tachycardia
Spo_2 = Oxygen saturation
TEE = Transesophageal echocardiography
TEVAR = Thoracic endovascular aortic repair
TIA = Transient ischemic attack
TID = Three times a day
TLOC = Transient loss of consciousness
TOE = Transoesopageal echocardiography

Abbreviations (Cont.)

TSH = Thyroid-stimulating hormone
TTE = Transthoracic echocardiography
UA = Unstable angina
UFH = Unfractionated heparin
ULN = Upper limit of normal
VBGA = venous blood gas analysis
VF = Ventricular fibrillation
VR = Vascular resistance
VT = Ventricular tachycardia
VTE = Venous thromboembolism
VVS = Vasovagal syncope
WBC = white blood cell count
WHO = World Health Organization
WPW = Wolff-Parkinson-White

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