

IRC 2021

CONGRESSO
NAZIONALE

16•17•18 DICEMBRE

NUOVE LINEE GUIDA 2021:
RIANIMAZIONE CARDIOPOLMONARE
POST-LOCKDOWN



Italian
Resuscitation
Council





ADVANCED LIFE SUPPORT

Algoritmo ALS





“Non è necessario rinunciare al passato per entrare nel futuro.
Quando si cambiano le cose non è necessario perderle.”

ALS 2021

5 TOP MESSAGES

- 1. High-quality chest compression with minimal interruption, early defibrillation, and treatment of reversible causes remain the priority**
- 2. Premonitory signs and symptoms often occur before cardiac arrest in- or out-of-hospital - cardiac arrest is preventable in many patients**
- 3. Use a basic or advanced airway technique - only rescuers with a high success rate should use tracheal intubation**
- 4. Use adrenaline early for non-shockable cardiac arrest**
- 5. In select patients, if feasible, consider extracorporeal CPR (eCPR) as a rescue therapy when conventional ALS is failing**

**Rimangono prioritarie
le compressioni
toraciche di alta qualità
con minima
interruzione e
defibrillazione precoce**

KEY RECOMMENDATIONS



Give a shock as early as possible for a shockable cardiac arrest



Deliver shocks with minimal interruption to chest compression, and minimise the pre-shock and post-shock pause - with a manual defibrillator aim for a total pause of less than 5 seconds



Aim for less than a 5 second interruption in chest compression for tracheal intubation

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**HIGH-QUALITY CPR WITH
MINIMAL INTERRUPTION**



EUROPEAN
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COUNCIL

KEY EVIDENCE



Early CPR, early defibrillation when appropriate, and high-quality CPR with minimal interruption improves survival from cardiac arrest

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PREVENTION OF CARDIAC ARREST



Riconosciuta l'importanza
dei segni premonitori,
probabilmente prevedibili

KEY RECOMMENDATIONS



Hospitals should have a clear policy for the clinical response to abnormal vital signs and critical illness



Symptoms such as chest pain, or syncope (especially during exercise, while sitting or supine), should be investigated

KEY EVIDENCE



In-hospital cardiac arrest is often preceded by physiological deterioration



Sudden cardiac death in the community is often preceded by unrecognised signs and symptoms



This provides an opportunity to recognise those at risk and prevent the cardiac arrest

Iniziare con tecniche di intubazione di base per proseguire in accordo con l'abilità del soccorritore

KEY RECOMMENDATIONS



During CPR, start with basic airway techniques and progress stepwise according to the skills of the rescuer until effective ventilation is achieved



If an advanced airway is required, only rescuers with a high tracheal intubation success rate should use tracheal intubation. The expert consensus is that a high success rate is over 95% within two attempts at intubation

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AIRWAY MANAGEMENT



KEY EVIDENCE



A systematic review that included 3 large RCTS of OHCA found no difference in outcomes between airway strategies using bag-mask ventilation, supraglottic airway, or tracheal intubation



The evidence suggests that tracheal intubation should only be used in settings where the success rates are high

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ADRENALINE

KEY EVIDENCE

KEY RECOMMENDATIONS



Give adrenaline 1 mg IV (IO) as soon as possible for adult patients in cardiac arrest with a non-shockable rhythm

Give adrenaline 1 mg IV (IO) after the 3rd shock for adult patients in cardiac arrest with a shockable rhythm

Repeat adrenaline 1 mg IV (IO) every 3-5 minutes whilst ALS continues



If used, adrenaline is most likely to be beneficial when given early



Any benefit from adrenaline is likely to be greater for a non-shockable rhythm cardiac arrest

EXTRACORPOREAL-CPR (eCPR)

Evidenza della RCP extracorporea (eCPR) come trattamento per pazienti selezionati

KEY EVIDENCE



A recent RCT and a large number of observational studies suggest eCPR improves survival in select patients in systems that have the expertise and resources to implement it

KEY RECOMMENDATIONS



Consider extracorporeal CPR (eCPR) as a rescue therapy for selected patients with cardiac arrest when conventional ALS measures are failing or to facilitate specific interventions (e.g. coronary angiography and percutaneous coronary intervention (PCI), pulmonary thrombectomy for massive pulmonary embolism, rewarming after hypothermic cardiac arrest) in settings in which it can be implemented

Algoritmo ALS

Unresponsive with absent
or abnormal breathing

Give high-quality chest compressions and

- Give oxygen
- Use waveform capnography
- Continuous compressions if advanced airway
- Minimise interruptions to compressions
- Intravenous or intraosseous access
- Give adrenaline every 3-5 min
- Give amiodarone after 3 shocks
- Identify and treat reversible causes

Consider

- Coronary angiography/percutaneous coronary intervention
- Mechanical chest compressions to facilitate transfer/treatment
- Extracorporeal CPR

Identify and treat reversible causes

- Hypoxia
- Hypovolaemia
- Hypo-/hyperkalemia/metabolic
- Hypo-/hyperthermia
- Thrombosis - coronary or pulmonary
- Tension pneumothorax
- Tamponade- cardiac
- Toxins

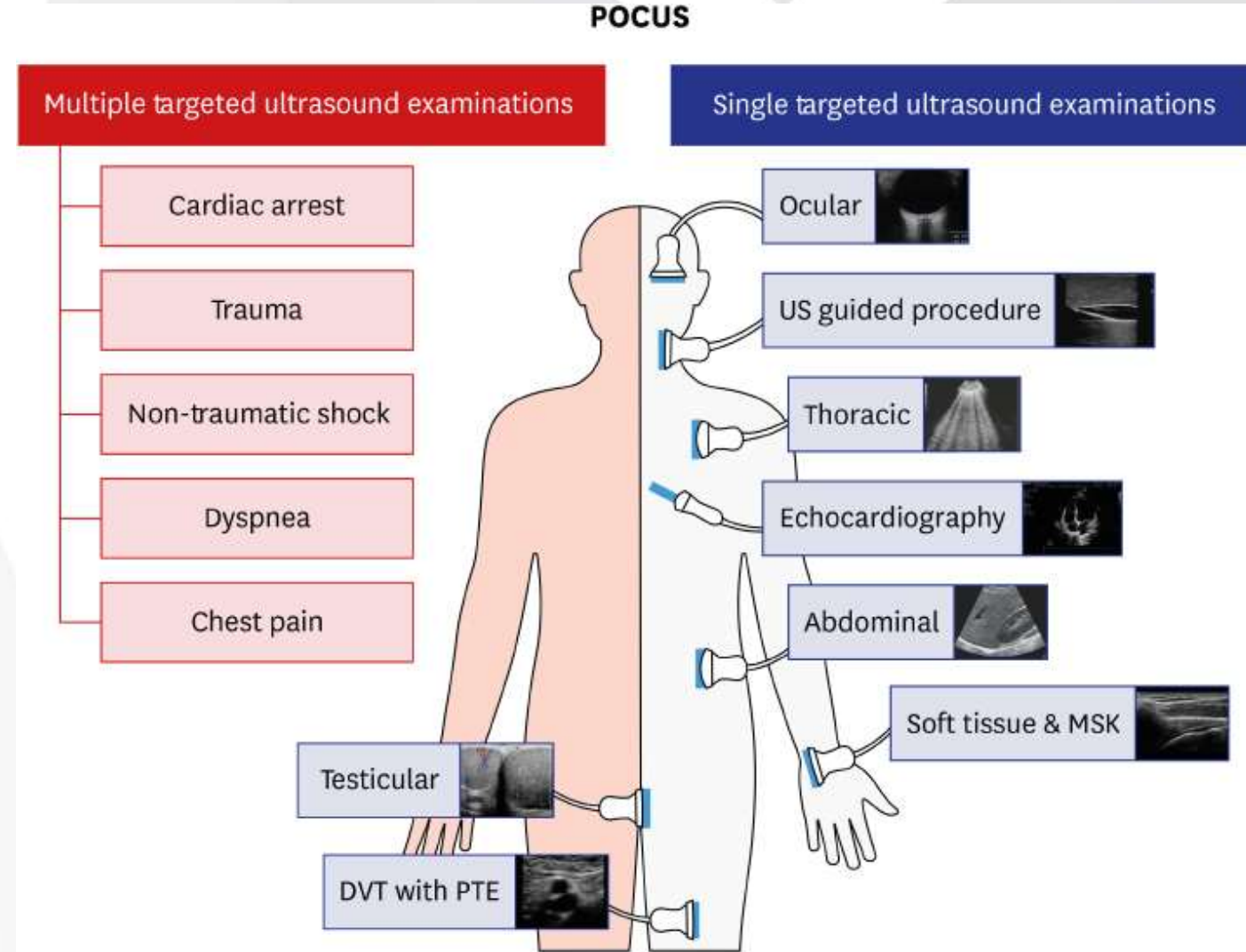
Consider ultrasound imaging to identify reversible causes

After ROSC

- Use an ABCDE approach
- Aim for SpO₂ of 94-98% and normal PaCO₂
- 12 Lead ECG
- Identify and treat cause
- Targeted temperature management

POCUS ultrasound imaging

- Solo operatori esperti
- che non comporti ulteriori interruzioni al massaggio
- Utile nella diagnosi di cause reversibili
- Non utilizzare la contrattilità miocardica come unico indicatore per terminare la RCP



End-of-life care

- Non ci sono indicazioni universali per la l'interruzione delle manovre di rianimazione
Il luogo in cui ci si trova, la cultura e il contesto legale devono essere valutati
Va considerata la sospensione della RCP dopo un'asistole prolungata (>20 minuti) in assenza di confounding bias, ritmo iniziale non defibrillabile o severa comorbidità
Non rianimare se non è in accordo con la volontà del paziente, se ci sono segni certi di morte o lesioni incompatibili con la vita, o se c'è pericolo per i soccorritori
I seguenti riscontri non devono essere utilizzati come unico indicatore per la sospensione della RCP
 - Pupille midriatiche o non reattive
 - RCP prolungata
 - ETCO₂
 - Comorbidità
 - Tentato suicidio

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