Que retenir de l'actualité en réanimation : Arrêt cardiaque

Pr Martin COUR

Médecine Intensive - Réanimation

Hôpital Edouard Herriot - Hospices Civils de Lyon

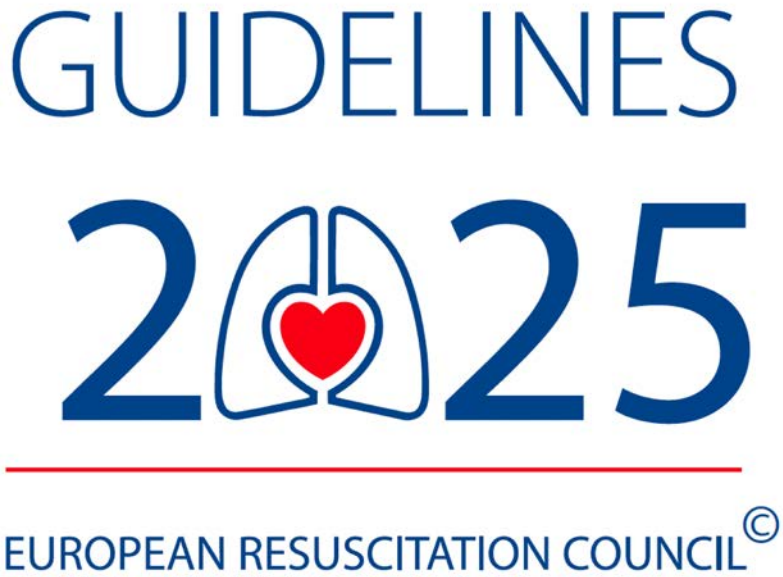
Congrès des Actualités en Réanimation

20 Novembre 2025 - Lyon

Conflits d'intérêts

Aucun à déclarer

Que retenir de l'actualité - AC : **Nouvelles recommandations**



erc.edu/science-research/guidelines/guidelines-2025/guidelines-2025-english/

Que retenir de l'actualité - AC : **Nouvelles recommandations**

GUIDELINES 2025

EUROPEAN RESUSCITATION COUNCIL©

erc.edu/science-research/guidelines/guidelines-2025/guidelines-2025-english/

Que retenir de l’actualité - AC : **Plan**

erc.edu/science-research/guidelines/guidelines-2025/guidelines-2025-english/

EPIDEMIOLOGY OF RESUSCITATION

Practice Guideline

European Resuscitation Council Guidelines 2025
Epidemiology in Resuscitation

68 ans

2/3 homme

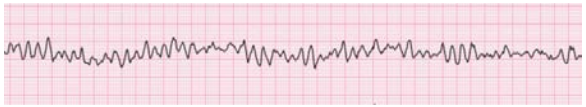
ACEH : 40000 / an

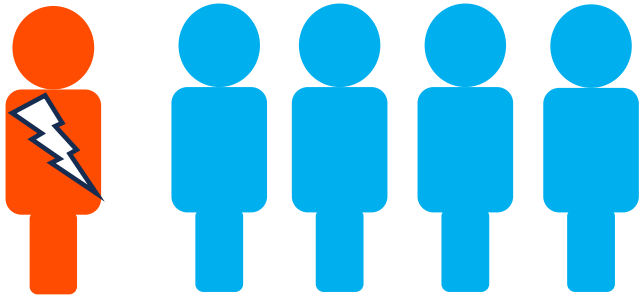
ACIH : 40000 / an

Practice Guideline

European Resuscitation Council Guidelines 2025
Epidemiology in Resuscitation

Rythme choquable





1 ACEH sur 5 !

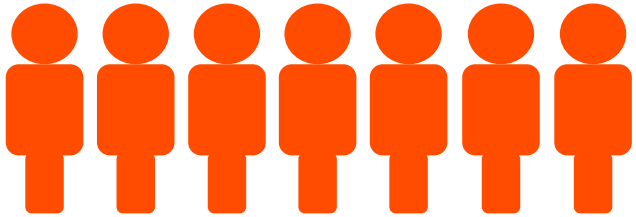
Baldi E et al. *Resuscitation* 2025;215:110733

EPIDEMIOLOGY OF RESUSCITATION

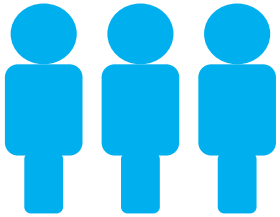
Practice Guideline

European Resuscitation Council Guidelines 2025
Epidemiology in Resuscitation

Etiologies

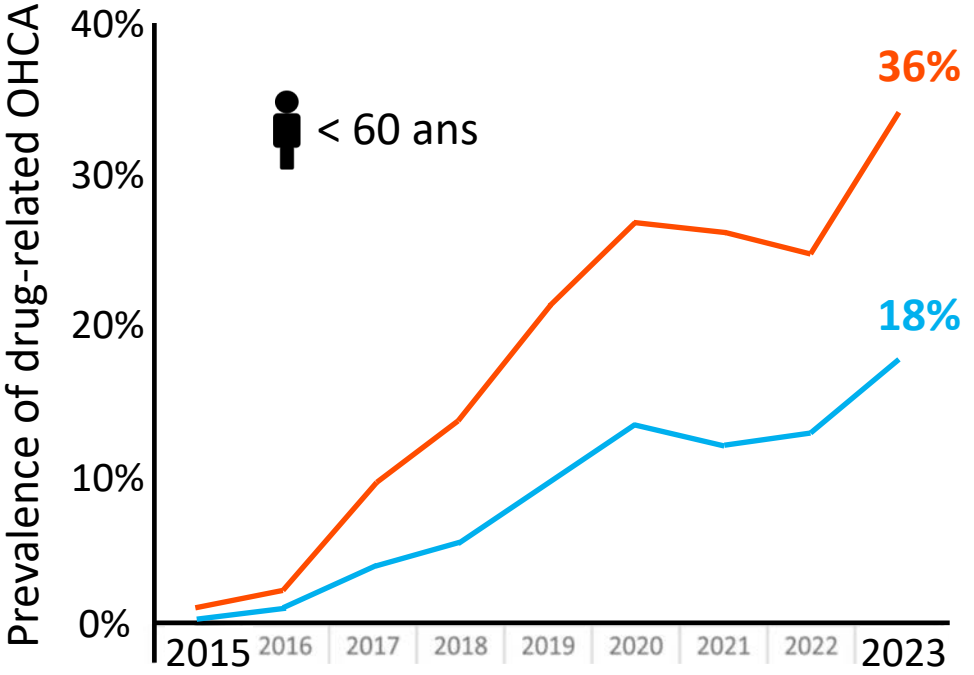


Origine cardiaque : **70%**



Autres : **30%**

Trends in presumed drug overdose out-of-hospital cardiac arrests in San Francisco, 2015–2023



Wang RC et al. *Resuscitation* 2024;198:110159

EPIDEMIOLOGY OF RESUSCITATION

Practice Guideline

European Resuscitation Council Guidelines 2025
Epidemiology in Resuscitation

Table 2 – Outcome reported for OHCAs in different European countries.

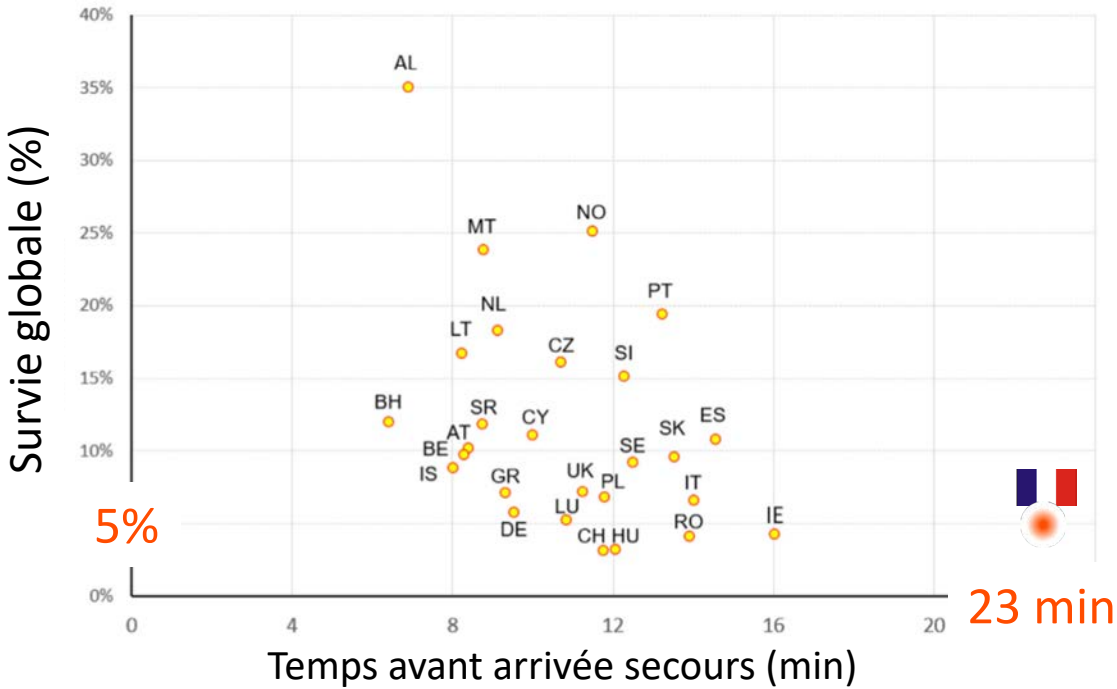
Country	Type of outcome	Rate
England	Survival at hospital discharge	7.9 %
France	Survival at hospital discharge	4.9 %
Spain	Survival at hospital discharge	11.5 %

Baldi E et al. *Resuscitation* 2025; 215:110733

European registry of cardiac arrest study THREE (EuReCa- THREE) – EMS response time influence on outcome in Europe

FR = FRANCE

Uniquement data SAMU



Gräsner JT et al. *Resuscitation* 2025 (In Press)

Que retenir de l'actualité - AC : **Réanimation basique**

ADULT BASIC LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025

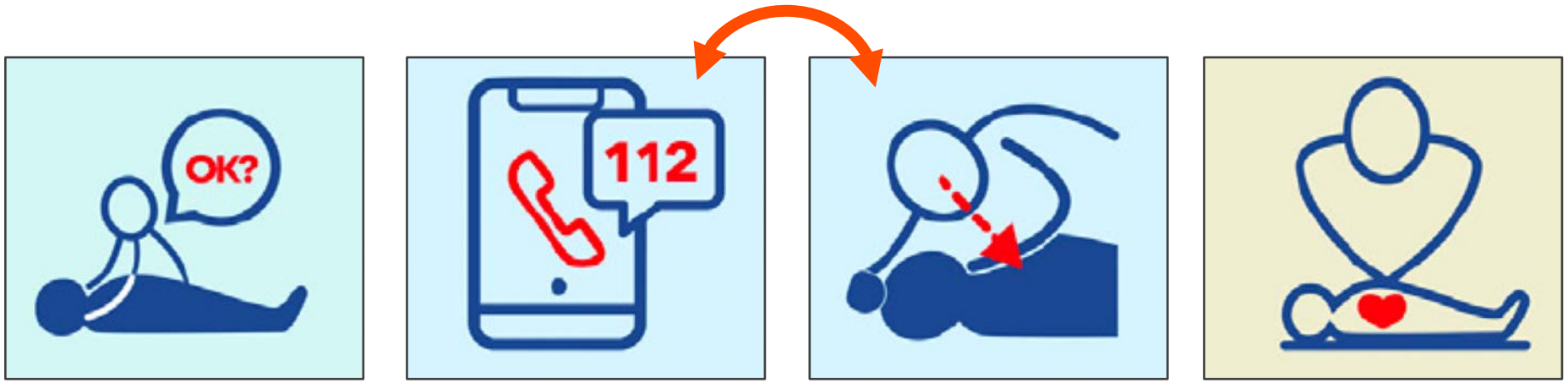
Adult Basic Life Support

Smyth MA et al. *Resuscitation* 2025;215:110771

ADULT BASIC LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Basic Life Support



L'appel des secours intervient plus précocément

Smyth MA et al. *Resuscitation* 2025;215:110771

ADULT BASIC LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Basic Life Support

Pas de bénéfice d'une planche dorsale

Ne pas déplacer patient du lit au sol

Utiliser la function rigidification matelas si dispo

La planche dorsale n'est plus recommandée

Smyth MA et al. *Resuscitation* 2025;215:110771

ADULT BASIC LIFE SUPPORT

Review

The optimal surface for delivery of CPR: An updated systematic review and meta-analysis

Study	Backboard N	Backboard Mean	Backboard SD	No backboard N	No backboard Mean	No backboard SD	Mean diff. with 95% CI	Weight (%)
Perkins 2006	20	31					5]	7.01
Anderson 2007	23	48					2]	12.11
Sano 2011	12	54					9]	15.23
Oh 2013	9	51.6					3]	16.00
Fischer 2016	21	41.2					7]	10.18
Sandri 2019	50	50.1					5]	20.18
Cuvelier 2022	59	52.85					9]	19.29
Overall							1]	

Heterogeneity: $\tau^2 = 2.59$, $I^2 =$

Test of $\theta_i = \theta_j$: Q(6) = 13.47, p

Test of $\theta = 0$: z = 2.58, p = 0.0

Matelas seul + Planche

+2 mm

-5 0 5 10

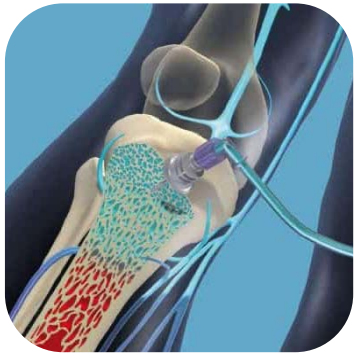
Dewan M et al. *Resuscitation Plus* 2024;9:100718

Que retenir de l'actualité - AC : **RCP spécialisée**

ADULT ADVANCED LIFE SUPPORT

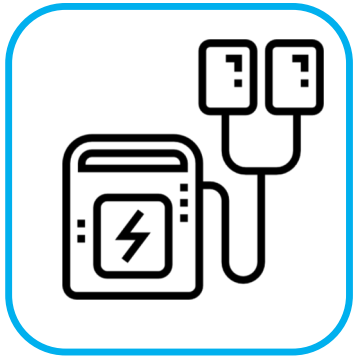
Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support

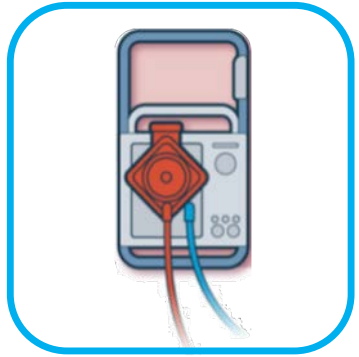


KT-IAO

O_2 / SpO_2



CEE



ECMO

Soar J et al. *Resuscitation* 2025;215:110769

Que retenir de l'actualité - AC : **RCP spécialisée**

ADULT ADVANCED LIFE SUPPORT

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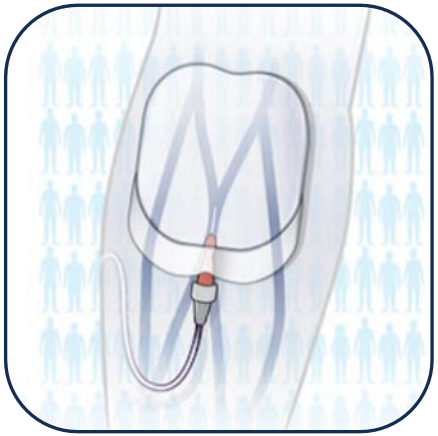
Adult Advanced Life Support

:

OU



?

Adrénaline KT-IAo VVP

Soar J et al. *Resuscitation* 2025;215:110769

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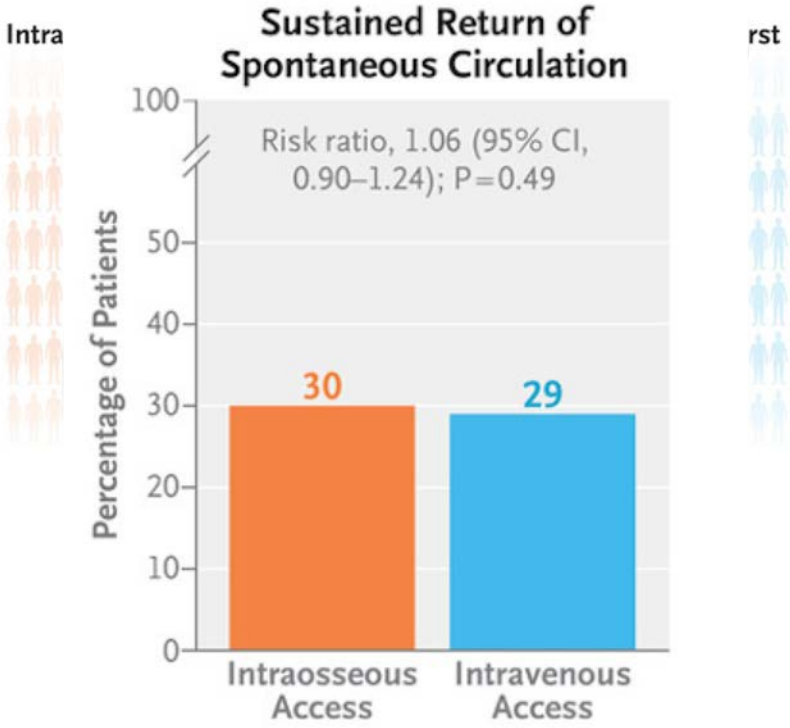
Intraosseous or Intravenous Access for Cardiac Arrest

A PLAIN LANGUAGE SUMMARY

Couper K et al *New Engl J Med* 2024

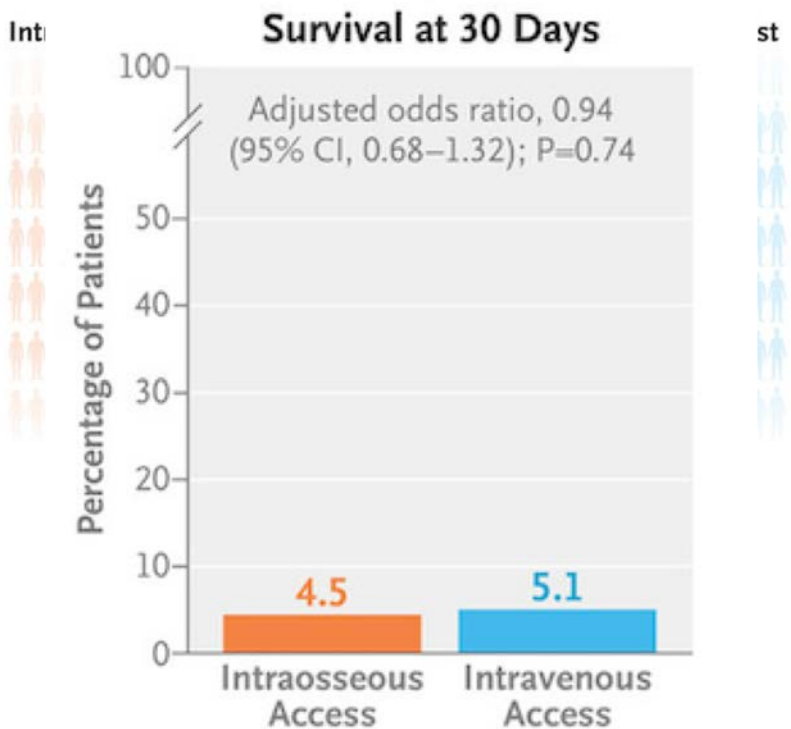


The NEW ENGLAND JOURNAL of MEDICINE

Drug Route in Out-of-Hospital Cardiac Arrest

A PLAIN LANGUAGE SUMMARY

Vallentin MF et al *New Engl J Med* 2024



The NEW ENGLAND JOURNAL of MEDICINE

Intraosseous or Intravenous Access for Cardiac Arrest

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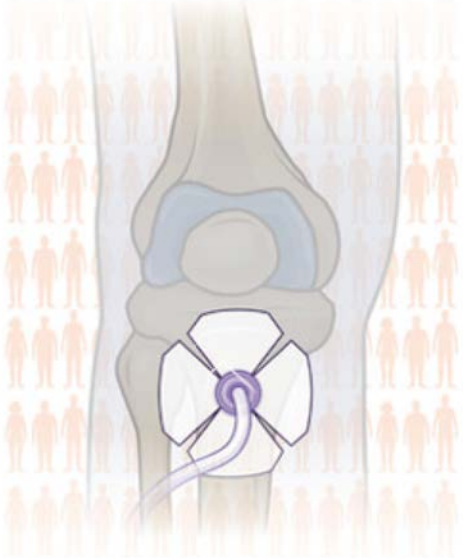


RACS

Position ok

	RACS	Position ok
Huméral (n=361)	30%	71%
Tibial (n=370)	31%	100%

Couper K et al. *New Engl J Med* 2024;392:349-360

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support

VVP en première intention

KTIAo après ≥ 2 échecs VVP

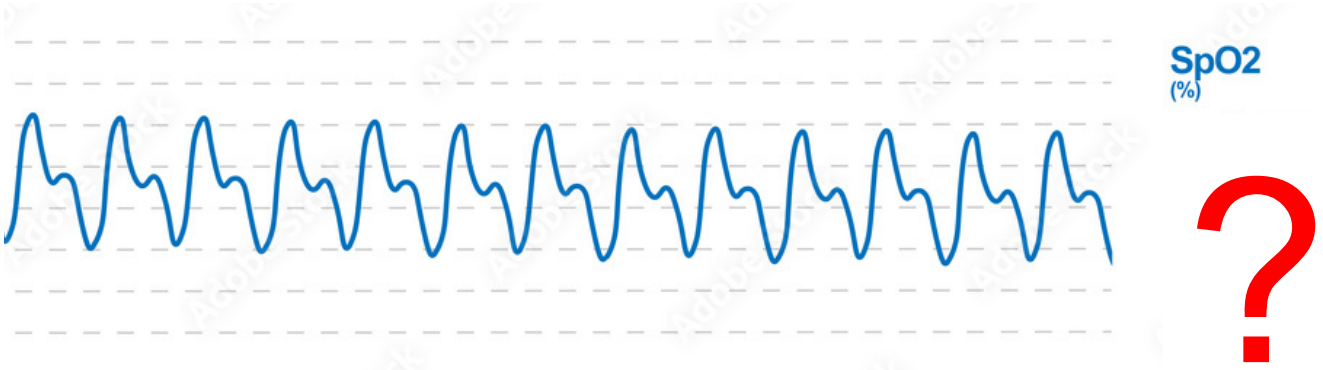
Adrénaline

ADULT ADVANCED LIFE SUPPORT

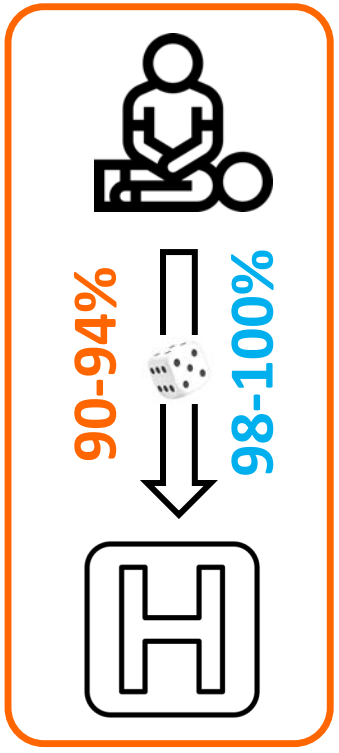
Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support

Oxygène



Que retenir de l'actualité - AC : **RCP spécialisée**



POPULATION

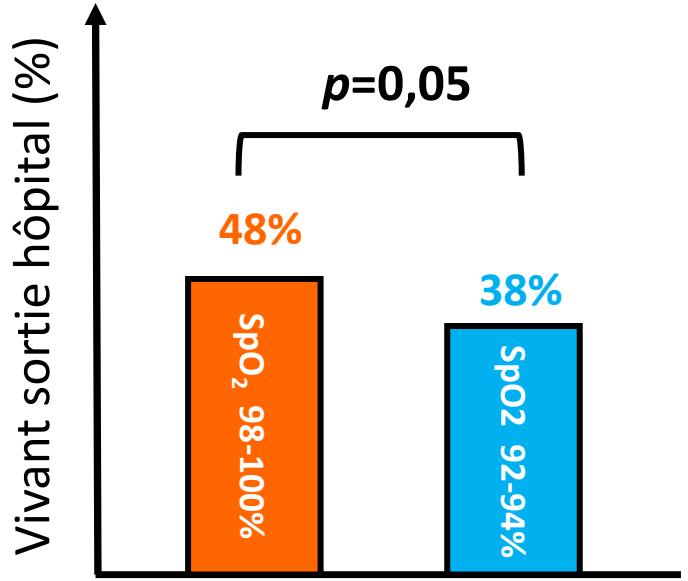
325 Men
100 Women

Adults with return of spontaneous circulation after out-of-hospital cardiac arrest

Median age: **66** years

LOCATIONS

2 Emergency medical services and **15** hospitals in Australia



EXACT TRIAL

Bernard SA et al. *JAMA* 2022;328:1818-26

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support

Oxygène

Maximum d'O_2 possible pendant RCP

Objectif SpO_2 post RACS : 94-98%

Uniquement si mesure fiable

Que retenir de l'actualité - AC : **RCP spécialisée**

ADULT ADVANCED LIFE SUPPORT

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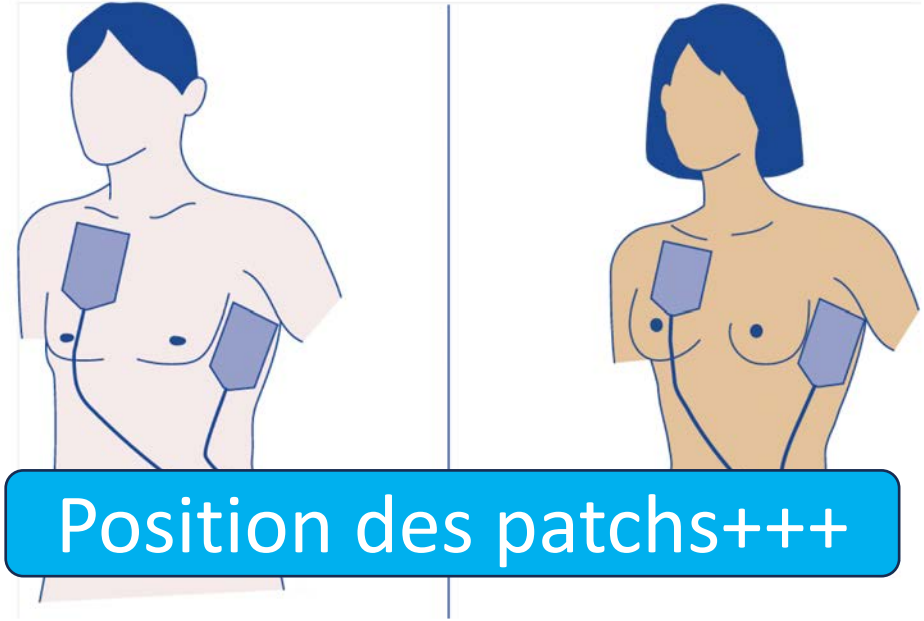
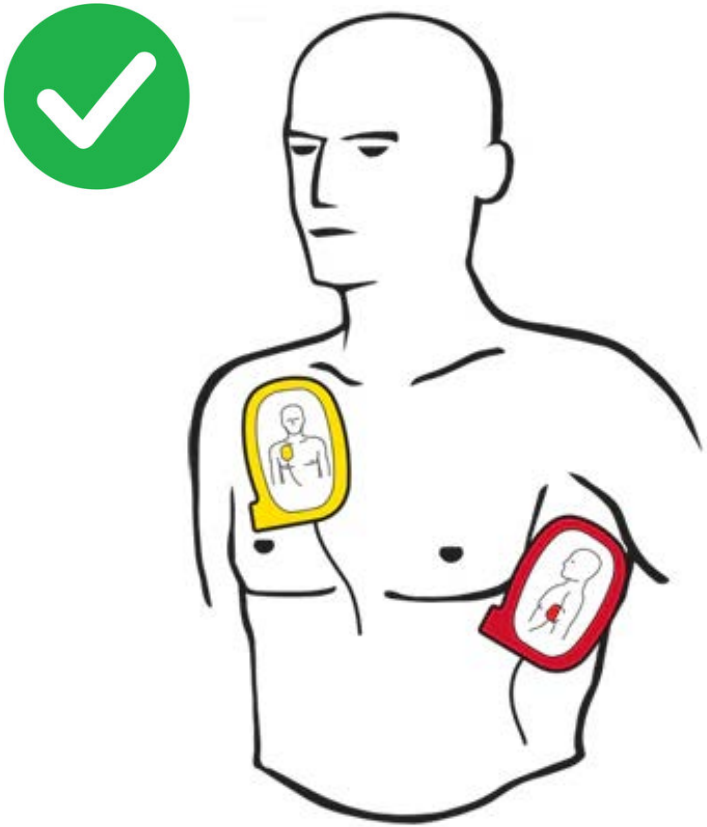
Défibrillation

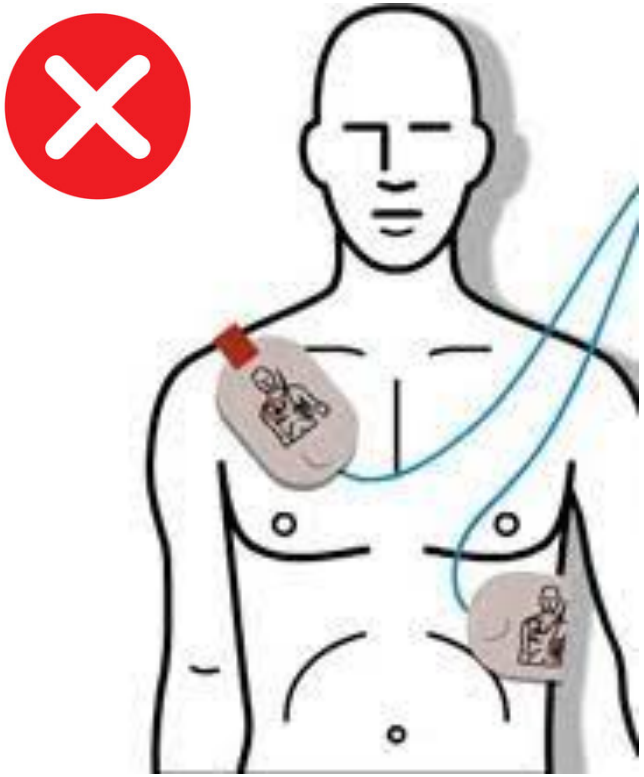


Position des patchs+++

Soar J et al. *Resuscitation* 2025;215:110769

Que retenir de l’actualité - AC : **RCP spécialisée**

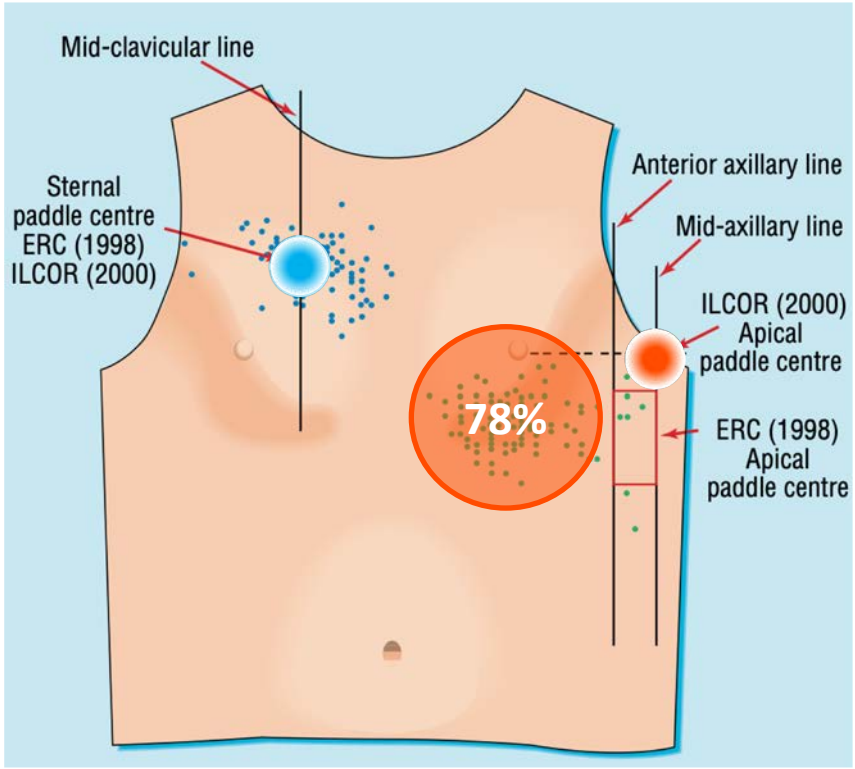




Soar J et al. *Resuscitation* 2025;215:110769

Do doctors position defibrillation paddles correctly? Observational study

Défibrillation



Heames RM et al. *BMJ* 2001; 322:1393-94

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Practice Guideline

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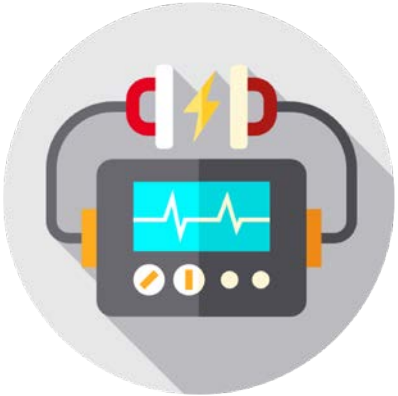
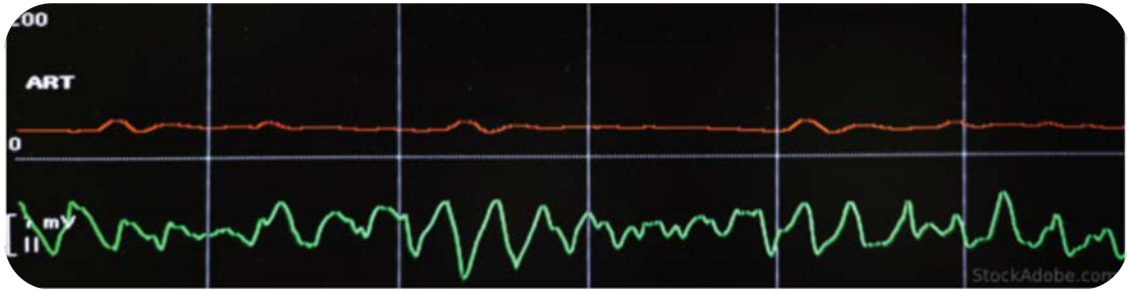
Adult Advanced Life Support



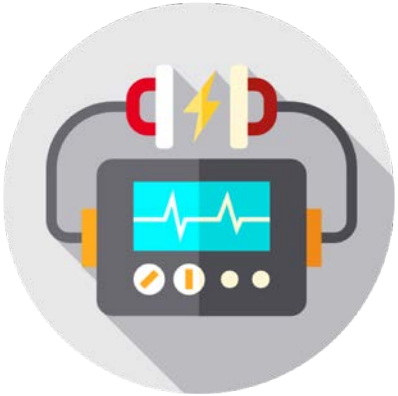
Défibrillation

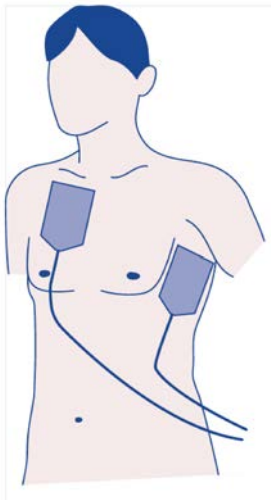


FV chez un patient monitoré :
jusqu'à 3 chocs successifs

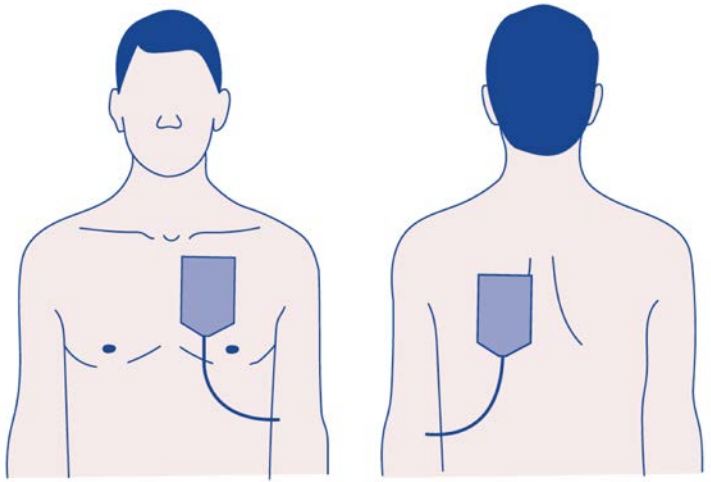
Original Investigation | Emergency Medicine

Initial Defibrillator Pad Position and Outcomes for Shockable Out-of-Hospital Cardiac Arrest





VS.

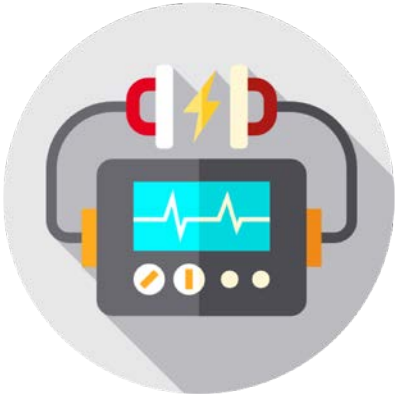


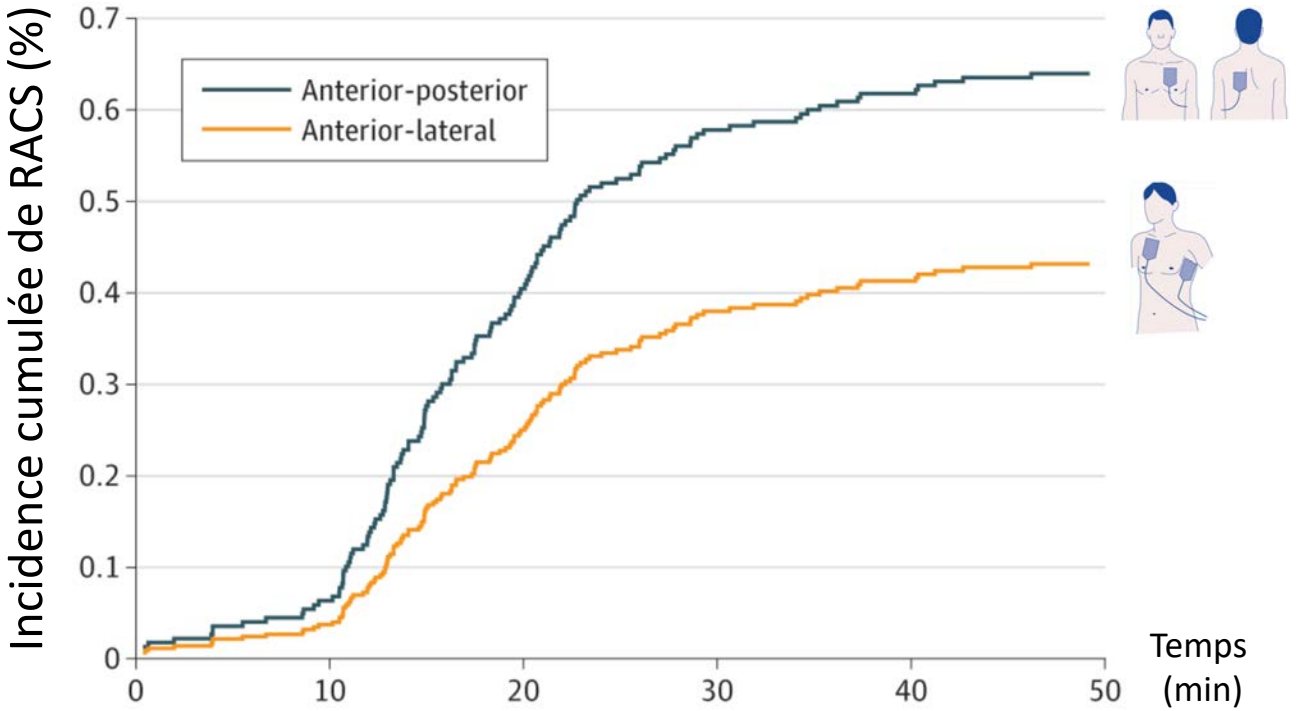
AL : n=97

AP : n=158

Original Investigation | Emergency Medicine

Initial Defibrillator Pad Position and Outcomes for Shockable Out-of-Hospital Cardiac Arrest



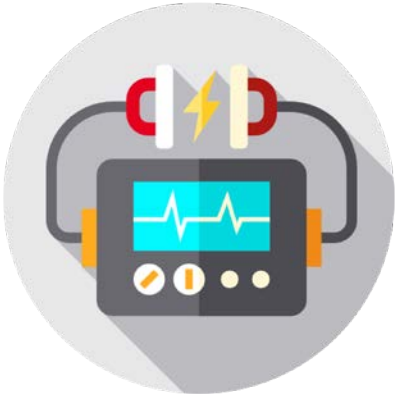


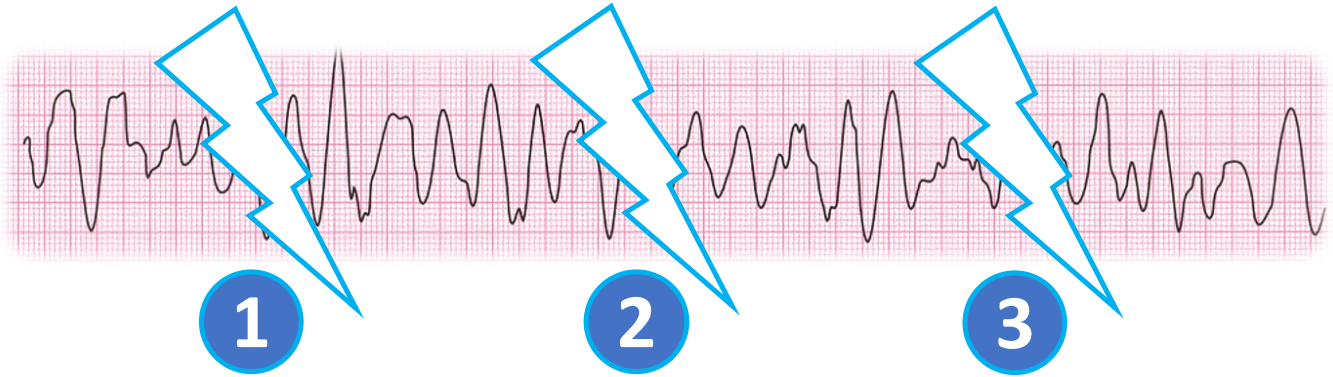
Lupton JR et al. *JAMA Netw Open* 2024;7:e2431673

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support

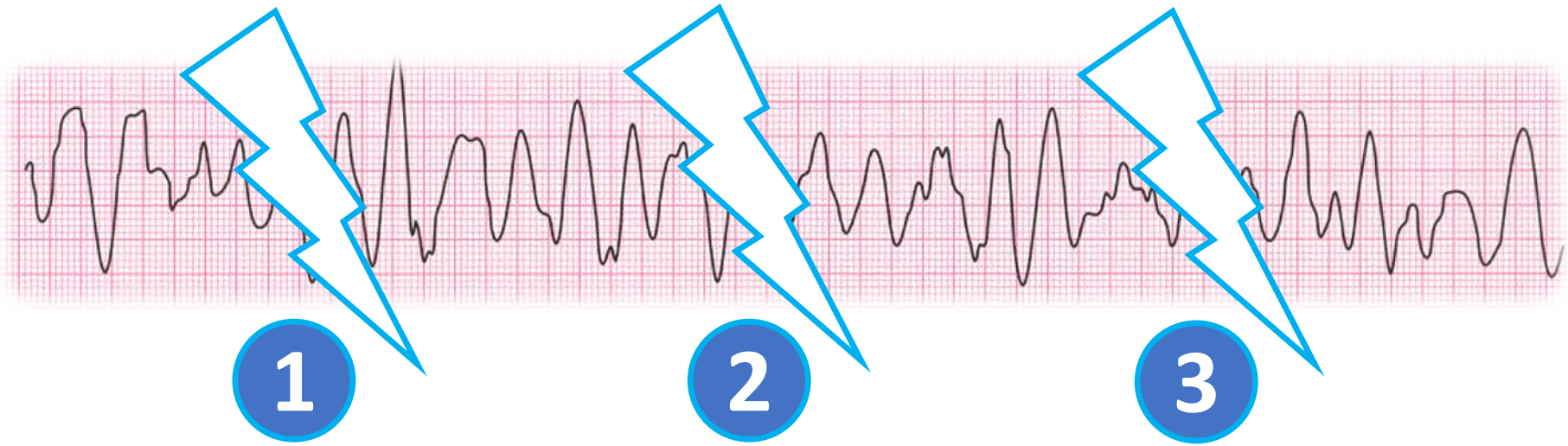




FV réfractaire

FV récidivante

Que retenir de l'actualité - AC : **RCP spécialisée**



20% des FV sont « réfractaires »

(Et 20% des rythmes sont choquables…)

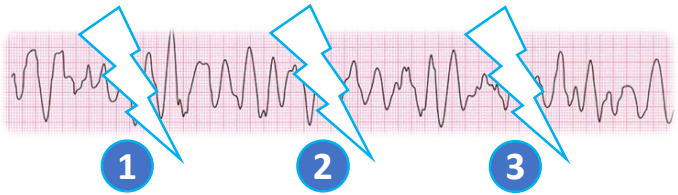
van Halem AP et al. *Resuscitation 2003*; 58:17-24

Que retenir de l'actualité - AC : **RCP spécialisée**

The NEW ENGLAND JOURNAL of MEDICINE

AMIODARONE FOR RESUSCITATION AFTER OUT-OF-HOSPITAL CARDIAC ARREST DUE TO VENTRICULAR FIBRILLATION

DAE



FV réfractaire : 3 CEE ou plus

(n=504)

\+

ADRE
1 mg

CORDARONE
300 mg IVD

PLACEBO

Kudenchuk PJ et al. *New Engl J Med* 1999; 341:871-8

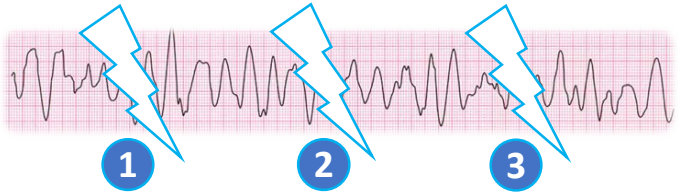
Que retenir de l'actualité - AC : **RCP spécialisée**

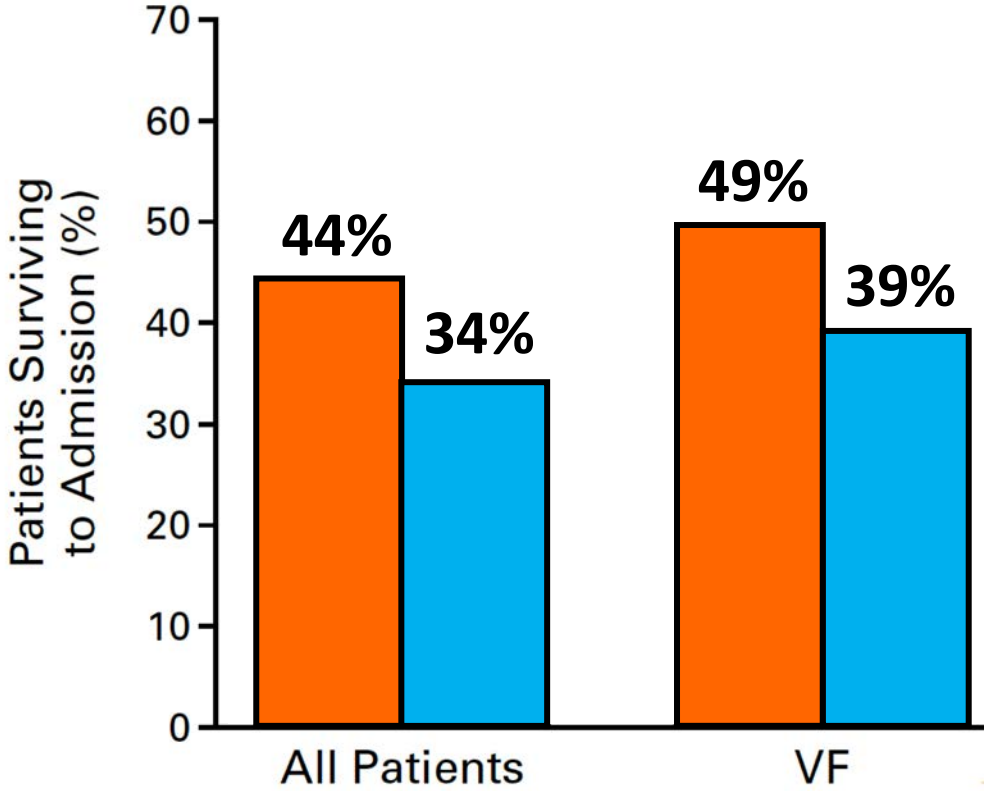
The NEW ENGLAND JOURNAL of MEDICINE

AMIODARONE FOR RESUSCITATION AFTER OUT-OF-HOSPITAL CARDIAC ARREST DUE TO VENTRICULAR FIBRILLATION

CORDARONE
300 mg IVD

PLACEBO





Kudenchuk PJ et al. *New Engl J Med* 1999; 341:871-8

Que retenir de l'actualité - AC : **RCP spécialisée**

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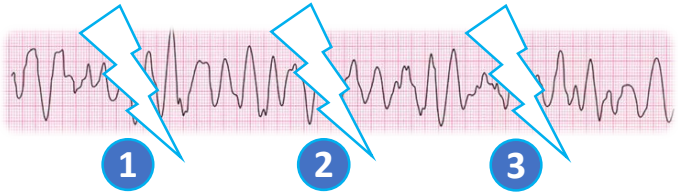
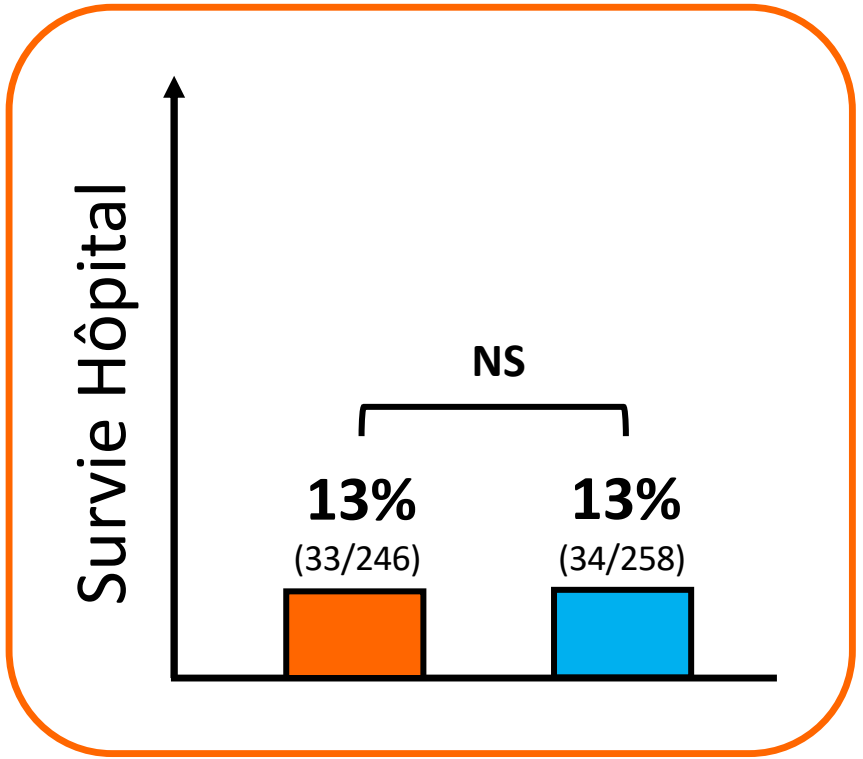
AMIODARONE FOR RESUSCITATION AFTER OUT-OF-HOSPITAL CARDIAC ARREST DUE TO VENTRICULAR FIBRILLATION

CORDARONE
300 mg IVD

PLACEBO





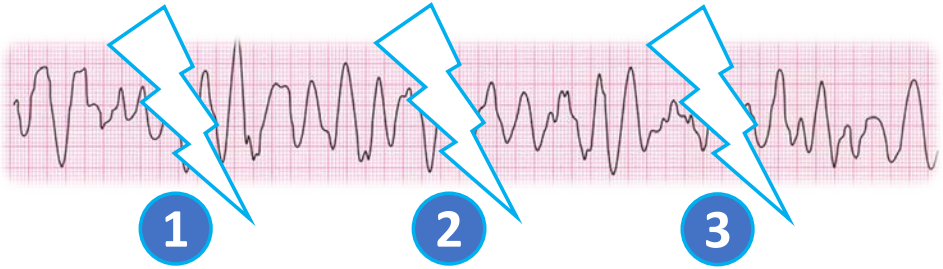
Kudenchuk PJ et al. *New Engl J Med* 1999; 341:871-8

Que retenir de l'actualité - AC : **RCP spécialisée**

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support



Adrénaline 1 mg

Cordarone 300 mg

(ou Xylocaïne 100 mg)

Soar J et al. *Resuscitation* 2025;215:110769

Que retenir de l'actualité - AC : **RCP spécialisée**

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

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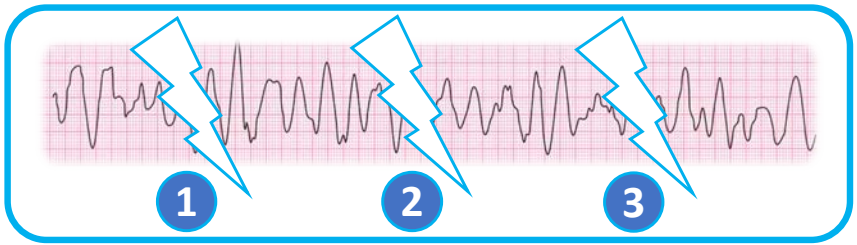
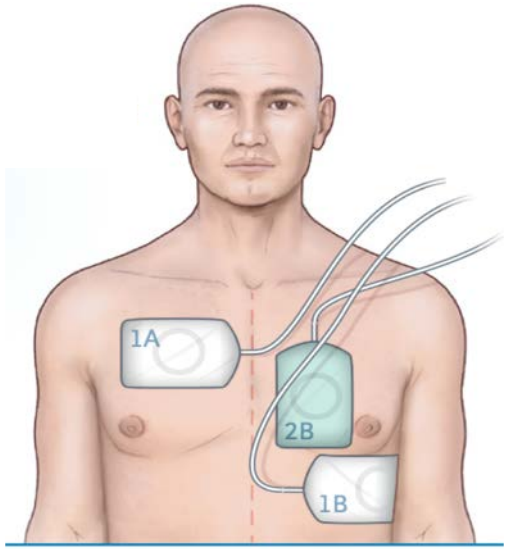
Adult Advanced Life Support





DDS ou changement vecteur

Soar J et al. *Resuscitation* 2025;215:110769

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

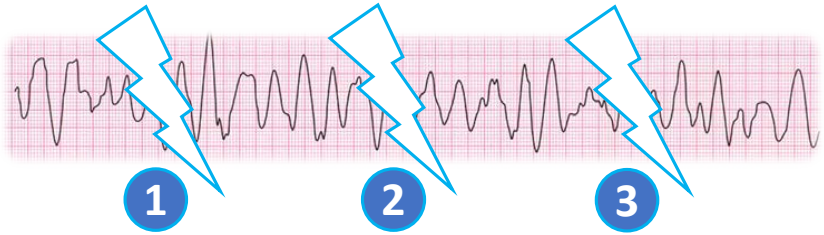
Defibrillation Strategies for Refractory Ventricular Fibrillation

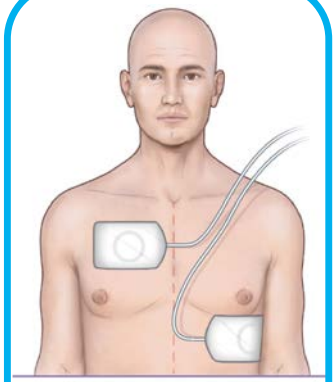
Sheldon Cheskes, M.D., P. Richard Verbeek, M.D., Ian R. Drennan, A.C.P., Ph.D., Shelley L. McLeod, Ph.D., Linda Turner, Ph.D., Ruxandra Pinto, Ph.D., Michael Feldman, M.D., Ph.D., Matthew Davis, M.D., Christian Vaillancourt, M.D., Laurie J. Morrison, M.D., Paul Dorian, M.D., and Damon C. Scales, M.D., Ph.D.

DOSE-VF STUDY

Cheskes S et al. *New Engl J Med 2022; 287:1947-1956*

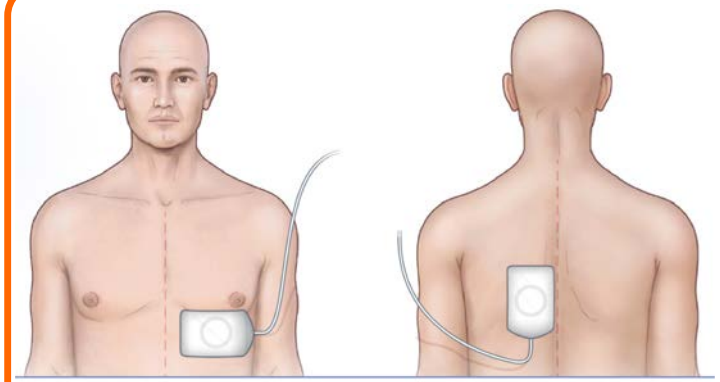
Que retenir de l'actualité - AC : **RCP spécialisée**





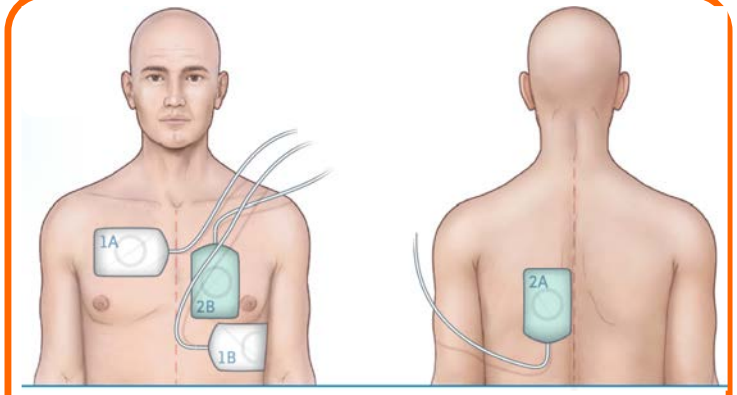
Contrôle

n=136/405



Défibrillation antéro-postérieure (DAP)

n=143/405



Défibrillation double séquence (DDS)

n=125/405

DOSE-VF STUDY

Cheskes S et al. *New Engl J Med 2022; 287:1947-1956*

Que retenir de l'actualité - AC : **RCP spécialisée**

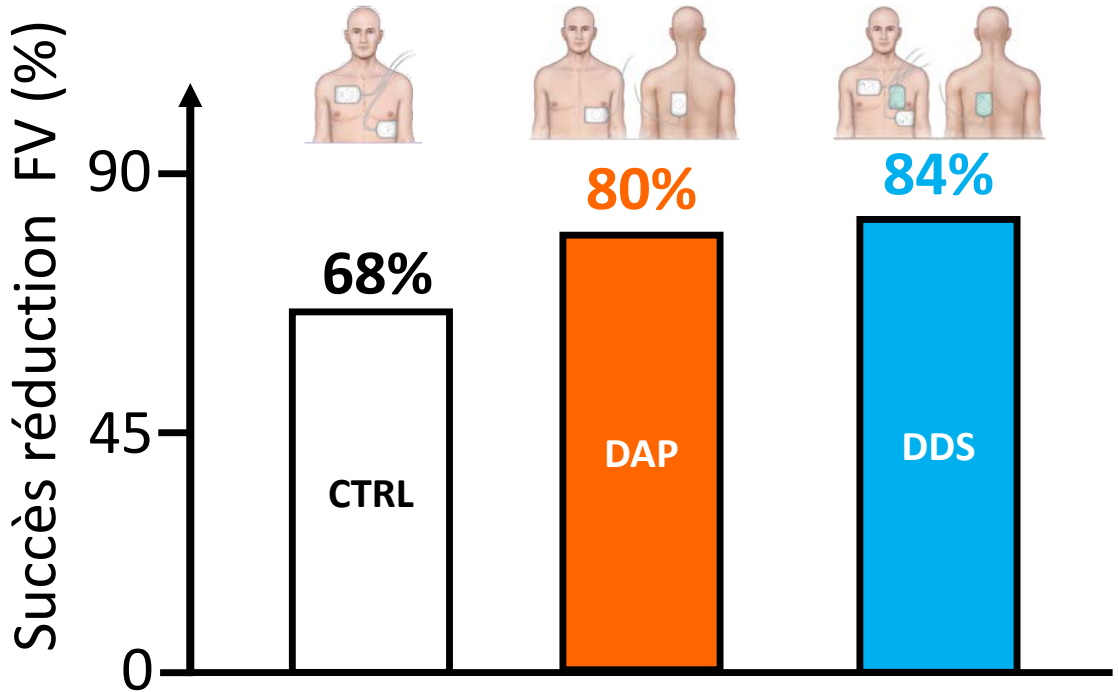
DOSE-VF STUDY

Cheskes S et al. *New Engl J Med 2022; 287:1947-1956*

Defibrillation Strategies for Refractory Ventricular Fibrillation

RCP / paramedics

Age : **64** ans
Homme : **84%**
Témoin : **68%**
911-Paramedics: **7'**
911-1er CEE **: 10'**



DOSE-VF STUDY

Cheskes S et al. *New Engl J Med 2022; 287:1947-1956*

Defibrillation Strategies for Refractory Ventricular Fibrillation

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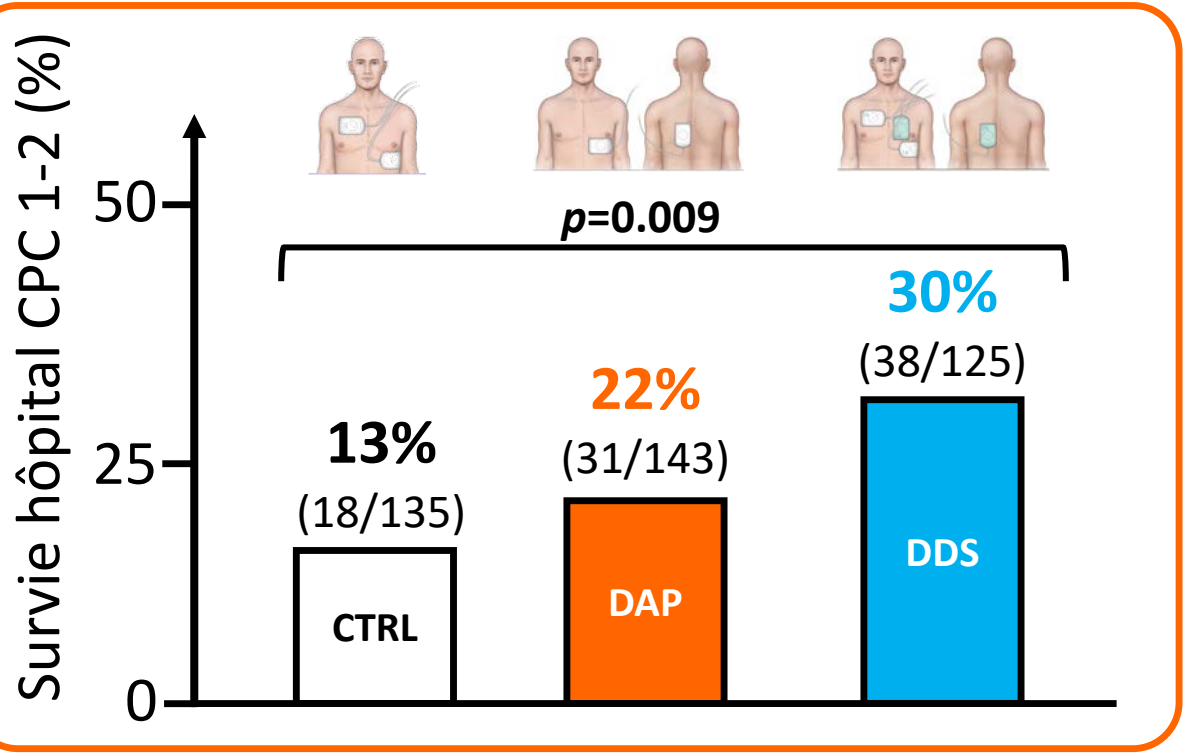
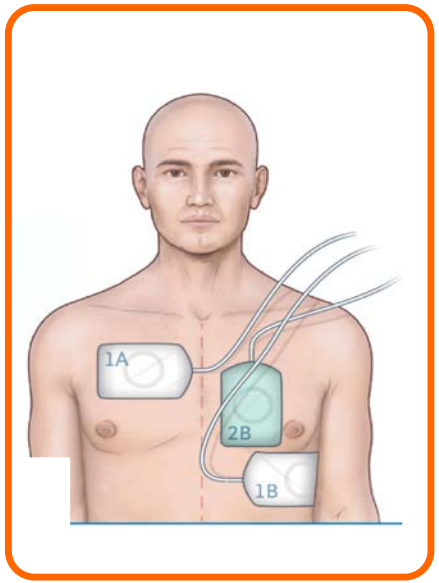


DOSE-VF STUDY

Cheskes S et al. *New Engl J Med 2022; 287:1947-1956*



Intubation ?

Adrénaline ?

Cordarone ?

2 défibrillateurs ?

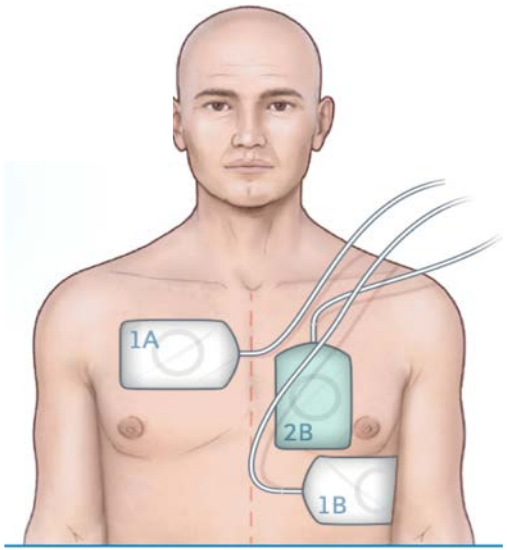
Formation ?

Cheskes S et al. *New Engl J Med* 2022; 287:1947-1956

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support



Guidelines 2025

Given the practical challenges of using two defibrillators to deliver DSD and the limited evidence for its efficacy the ERC does not recommend its routine use.

DDS non recommandée en routine

Soar J et al. *Resuscitation* 2025;215:110769

Que retenir de l'actualité - AC : **RCP spécialisée**

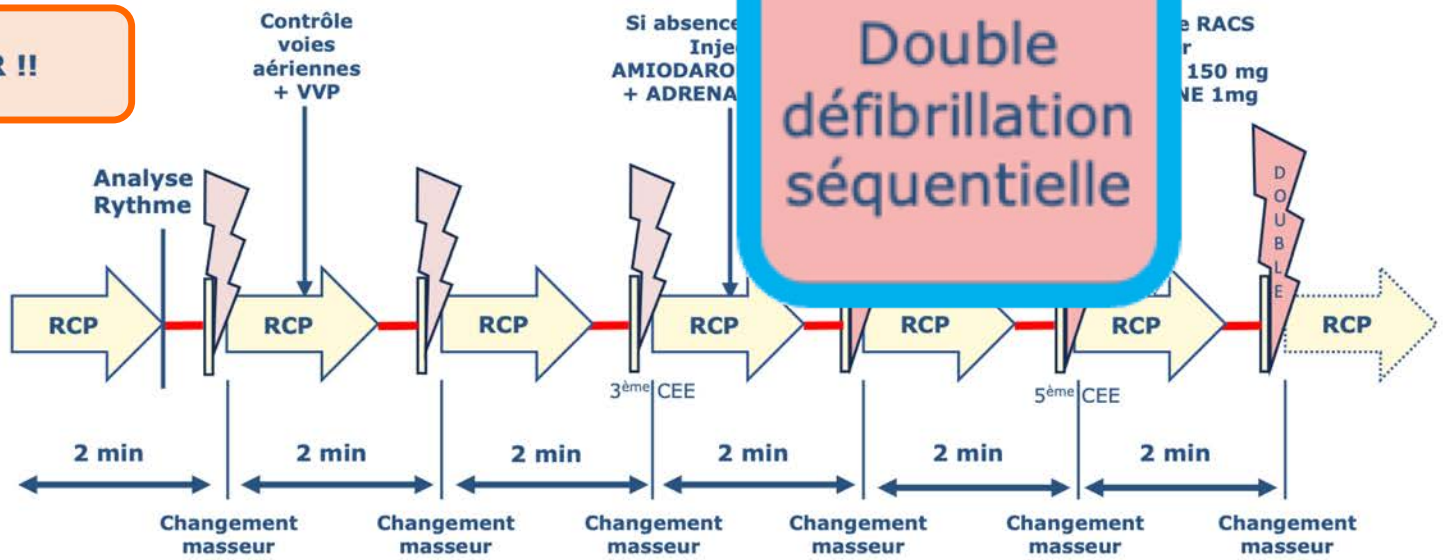
Urg'Ara

Prise en charge de l'arrêt cardiaque extra-hospitalier

Rédaction :	Groupe de travail Arrêt Cardiaque Urg'Ara
Validation :	Comité Scientifique Urg'Ara
Date :	07/2023
Version :	V1.0

2. AC avec rythme choqua… …s

Penser à l'ECPR !!

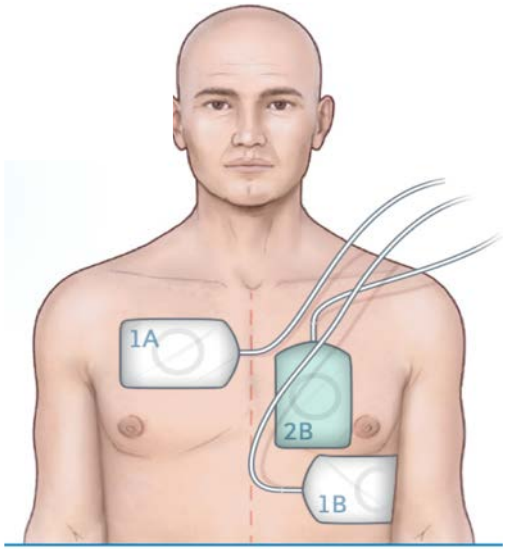


Double défibrillation séquentielle

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support



Guidelines 2025

For refractory VF, defined as continuous VF after three consecutive shocks, and having ensured correct antero-lateral pad positioning, consider using a defibrillation vector change by using an alternative defibrillation pad position (e.g. antero-posterior).

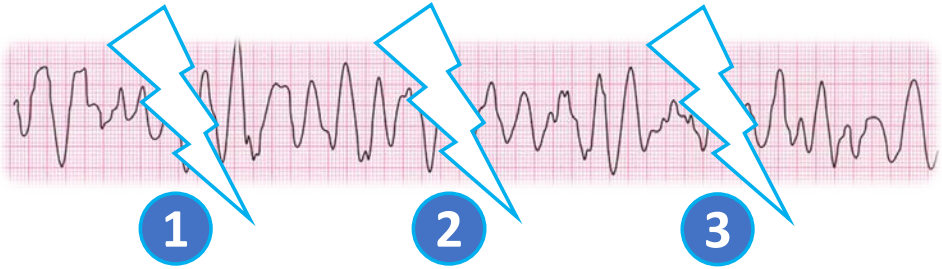
Considérer un changement de vecteur pour FV réfractaire (≥ 3 CEE)

Soar J et al. *Resuscitation* 2025;215:110769

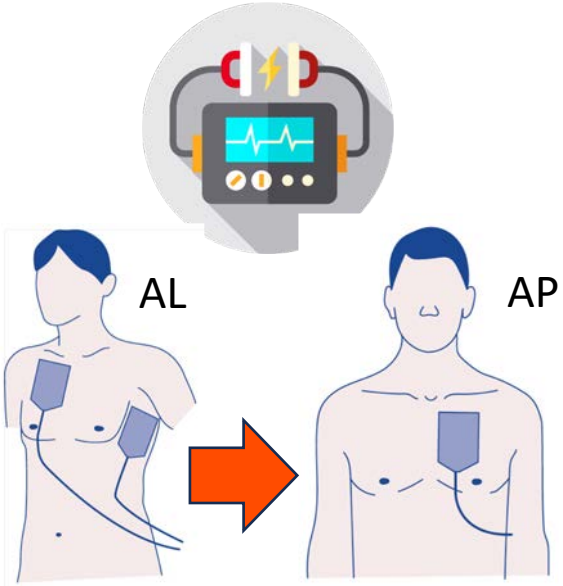
ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support

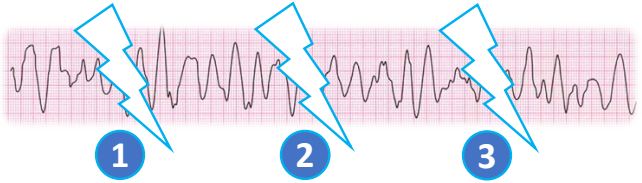


Vérifier position patchs !



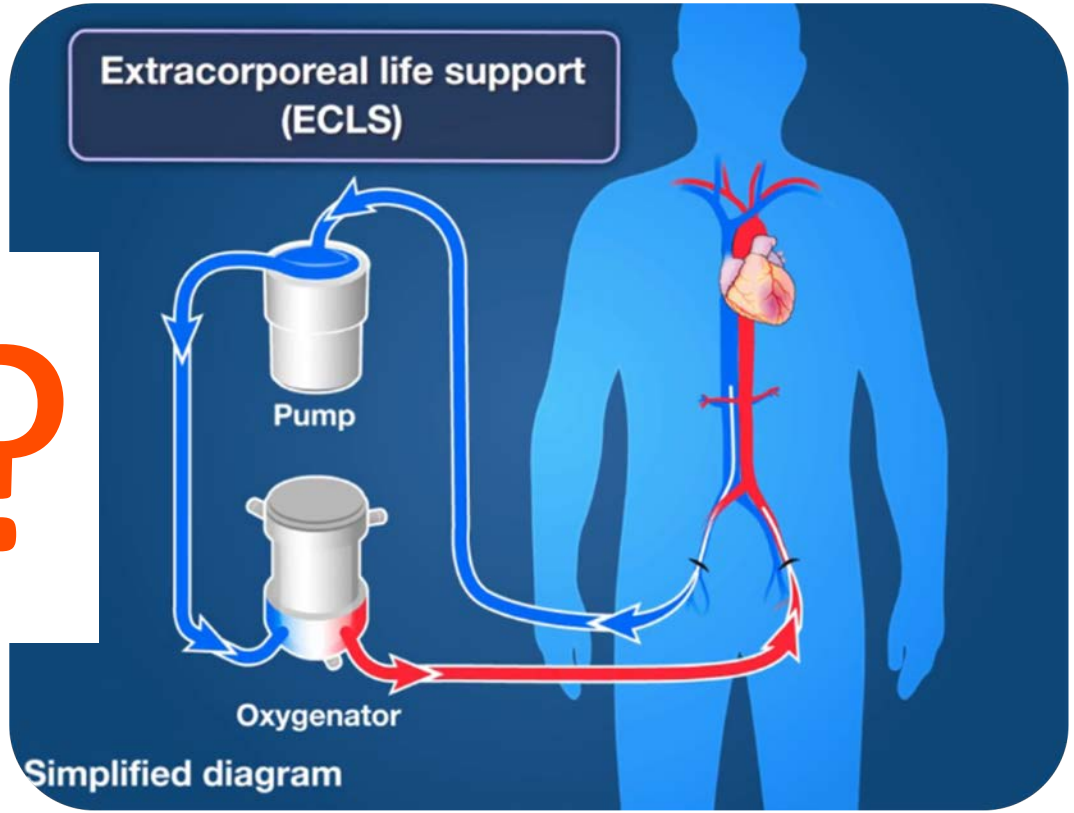
Changement de vecteur

Que retenir de l'actualité - AC : **RCP spécialisée**



FV réfractaire / AC réfractaire

?

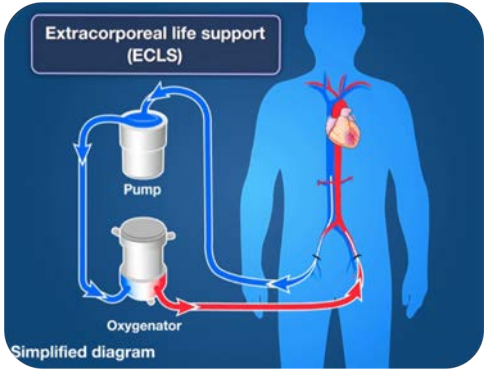


Que retenir de l'actualité - AC : **RCP spécialisée**

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025
Adult Advanced Life Support



Guidelines 2025

ECPR may be considered as a rescue therapy for selected adults with IHCA and OHCA when conventional CPR is failing to restore spontaneous circulation, in settings in which this can be implemented.

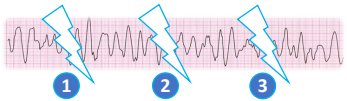
ECMO possible chez patients sélectionnés

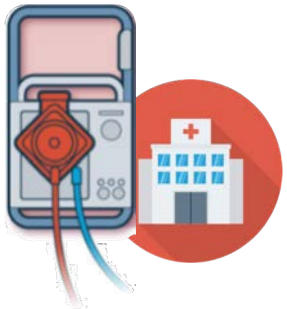
Soar J et al. *Resuscitation* 2025;215:110769

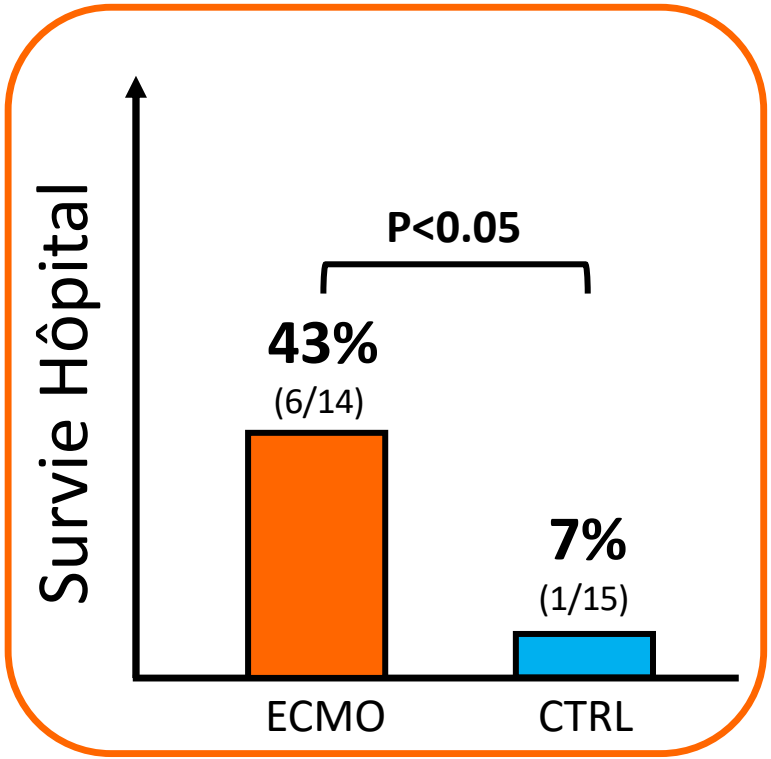
Que retenir de l'actualité - AC : **RCP spécialisée**

Advanced reperfusion strategies for patients with out-of-hospital cardiac arrest and refractory ventricular fibrillation (ARREST): a phase 2, single centre, open-label, randomised controlled trial

(n=29)





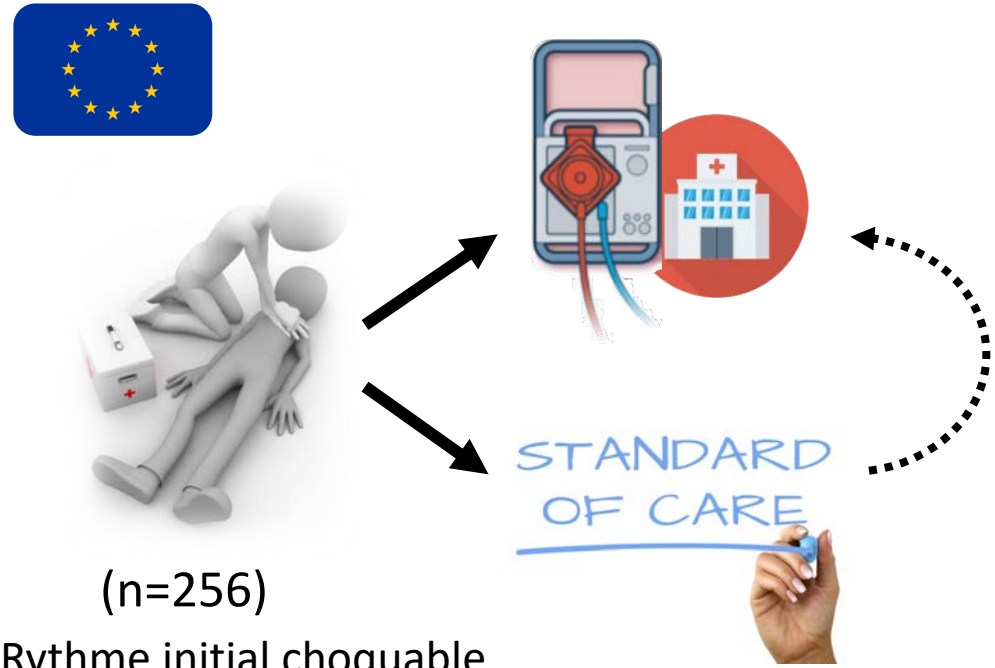


ARREST TRIAL

Yannopoulos D et al. *Lancet* 2020;396:1807-1816

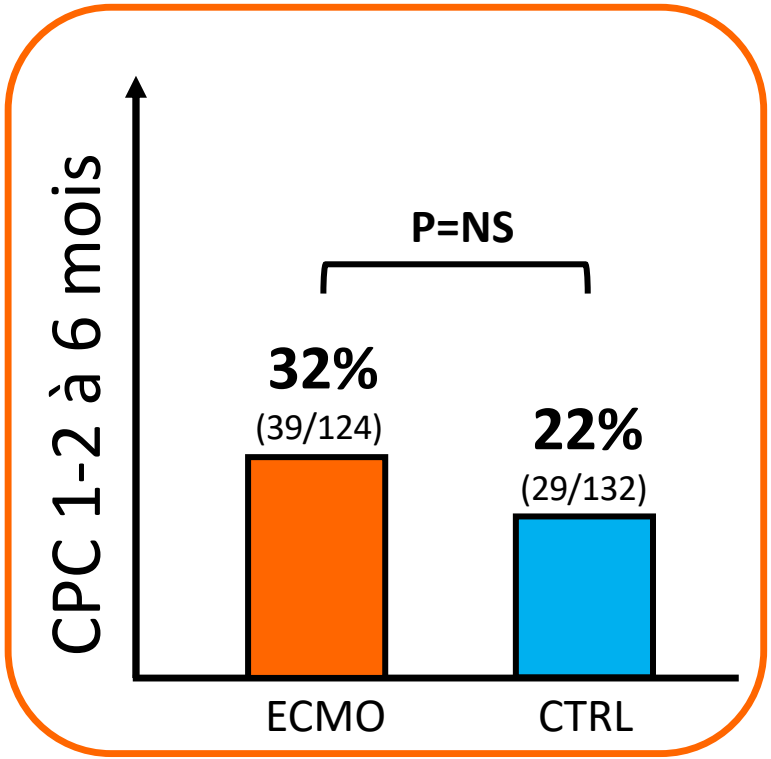
PRAGUE OHCA TRIAL

Essai monocentrique en République Tchèque



(n=256)

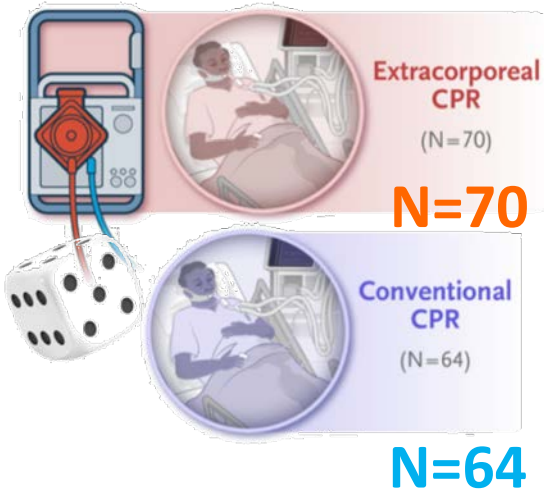
Rythme initial choquable



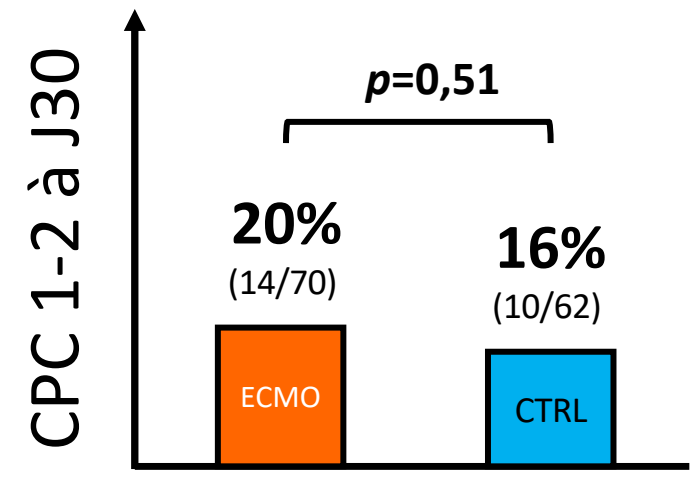
Belohlavek J et al. *JAMA* 2022;327:737-47

Early Extracorporeal CPR for Refractory Out-of-Hospital Cardiac Arrest

Essai multicentrique en Allemagne



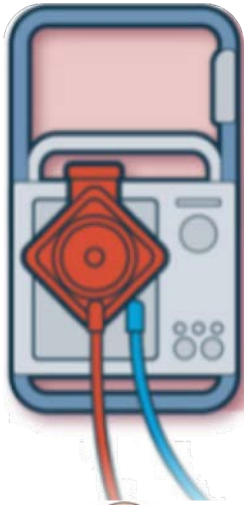
AC-ECMO : 74'

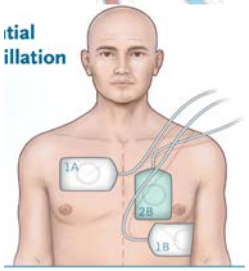


INCEPTION TRIAL

Suverein MM et al. *New Engl J Med 2023; 388:299-309*

Que retenir de l'actualité - AC : **RCP spécialisée**





	Réa standard	ECMO	P
ARREST (*Lancet* 2020)	**n=15**	**n=14**	
Survie 6 mois CPC1-2	**0%**	**43%**	<0.001
PRAGUE OHCA (*JAMA* 2022)	**n=132**	**n=124**	
Survie 6 mois CPC1-2	**22%**	**32%**	NS
INCEPTION (*NEJM* 2023)	**n=64**	**n=70**	
Survie 6 mois CPC1-2	**16%**	**20%**	NS

DOSE VF-STUDY (*NEJM* 2022)	**Réa standard**	**DDS**	**P**
RANKIN modifié ≤2	**11%**	**27%**	0.009

Que retenir de l'actualité - AC : **RCP spécialisée**

Completed

ON-SCENE Initiation of Extracorporeal CardioPulmonary Resuscitation During Refractory Out-of-Hospital Cardiac Arrest (ON-SCENE)

ClinicalTrials.gov ID NCT04620070

Sponsor Erasmus Medical Center

Information provided by Dinis Reis Miranda, Erasmus Medical Center (Responsible Party)

Last Update Posted 2025-09-05

N=221

TV/FV ou EP

ON-SCENE TRIAL

Ali et al. *Scand J Trauma Resusc Emerg Med* 2024;32:31

ADULT ADVANCED LIFE SUPPORT

Practice Guideline

European Resuscitation Council Guidelines 2025 Adult Advanced Life Support

Table 1 – What's new in the ERC Guidelines 2025 adult Advanced Life Support?

	Guidelines 2021	Guidelines 2025
ALS in highly-monitored cardiac arrest, and	• Not mentioned in Guidelines 2021	• A sudden decrease in $ETCO_2$ may indicate a cardiac arrest or very low cardiac output state despite interventions.

MCE si PAS < 50 après traitements

Si PA invasive : Adrénaline par 0,1 mg

Objectif PAD > 30 et EtCO2 > 25 mmHg

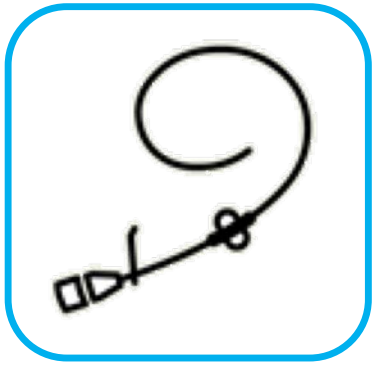
1 mg bolus.

and an $ETCO_2 \geq 25$ mmHg (3.3 kPa).

Soar J et al. *Resuscitation* 2025;215:110769

Practice Guideline

European Resuscitation Council and European Society of Intensive Care Medicine Guidelines 2025 Post-Resuscitation Care ☆



Coronarographie

◇

hypothermie

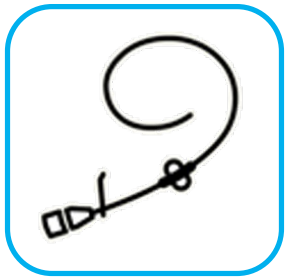
◇

Pression artérielle

Nolan JP et al. *Resuscitation* 2025; 215:110809

Practice Guideline

European Resuscitation Council and European Society of Intensive Care Medicine Guidelines 2025 Post-Resuscitation Care ☆



Coronarographie

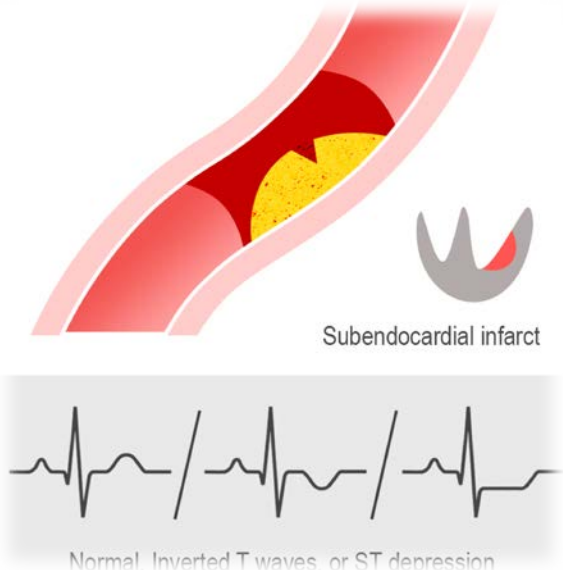
2025 Guidelines

Suggests delaying cardiac catheterisation if clinical context does not clearly indicate a high likelihood of acute coronary occlusion in OHCA patients without ST-

Différer la coronarographie si pas de STEMI

Nolan JP et al. *Resuscitation* 2025; 215:110809

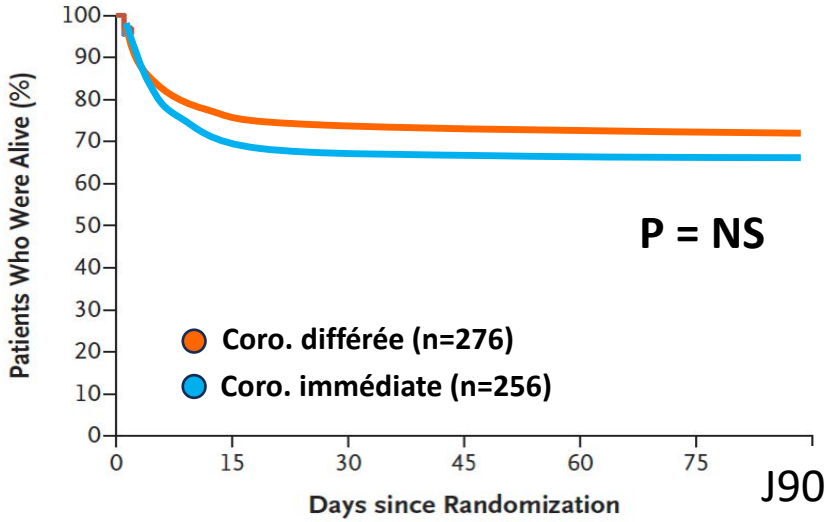
AC sans élévation du segment ST ? Rythme choquable



N=542

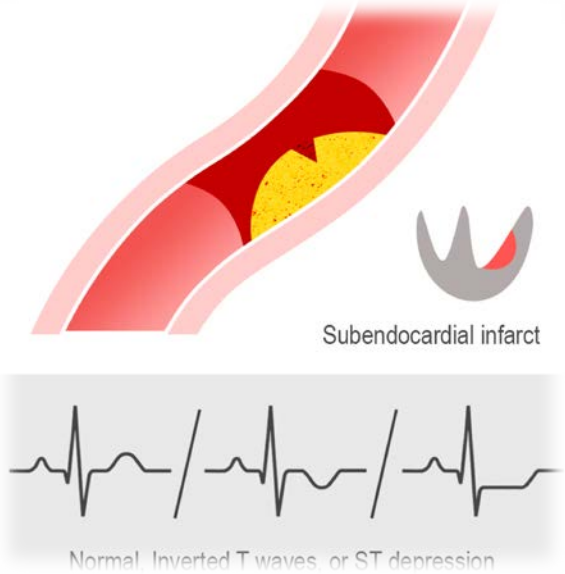
The NEW ENGLAND JOURNAL of MEDICINE
ESTABLISHED IN 1812 APRIL 11, 2019 VOL. 380 NO. 15

Coronary Angiography after Cardiac Arrest without ST-Segment Elevation



Lemkes JS et al. *New Engl J Med* 2019;380:1397-407

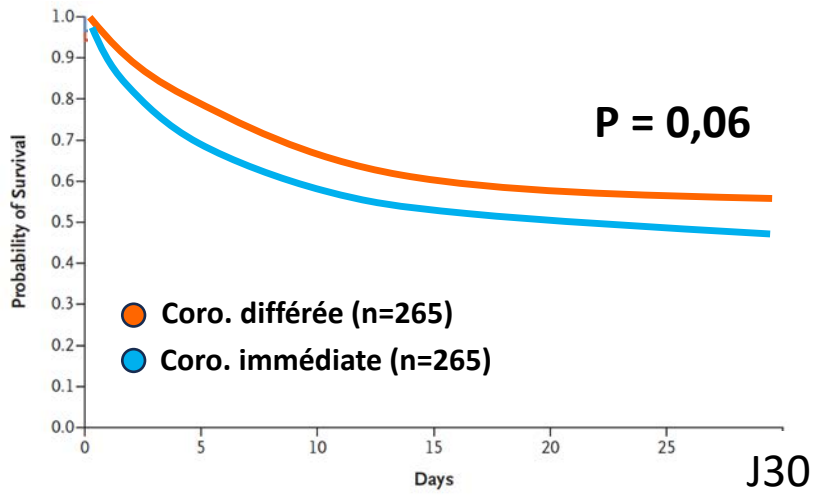
AC sans élévation du segment ST ? Choquable ET non choquable



N=530

The NEW ENGLAND JOURNAL of MEDICINE

Angiography after Out-of-Hospital Cardiac Arrest without ST-Segment Elevation



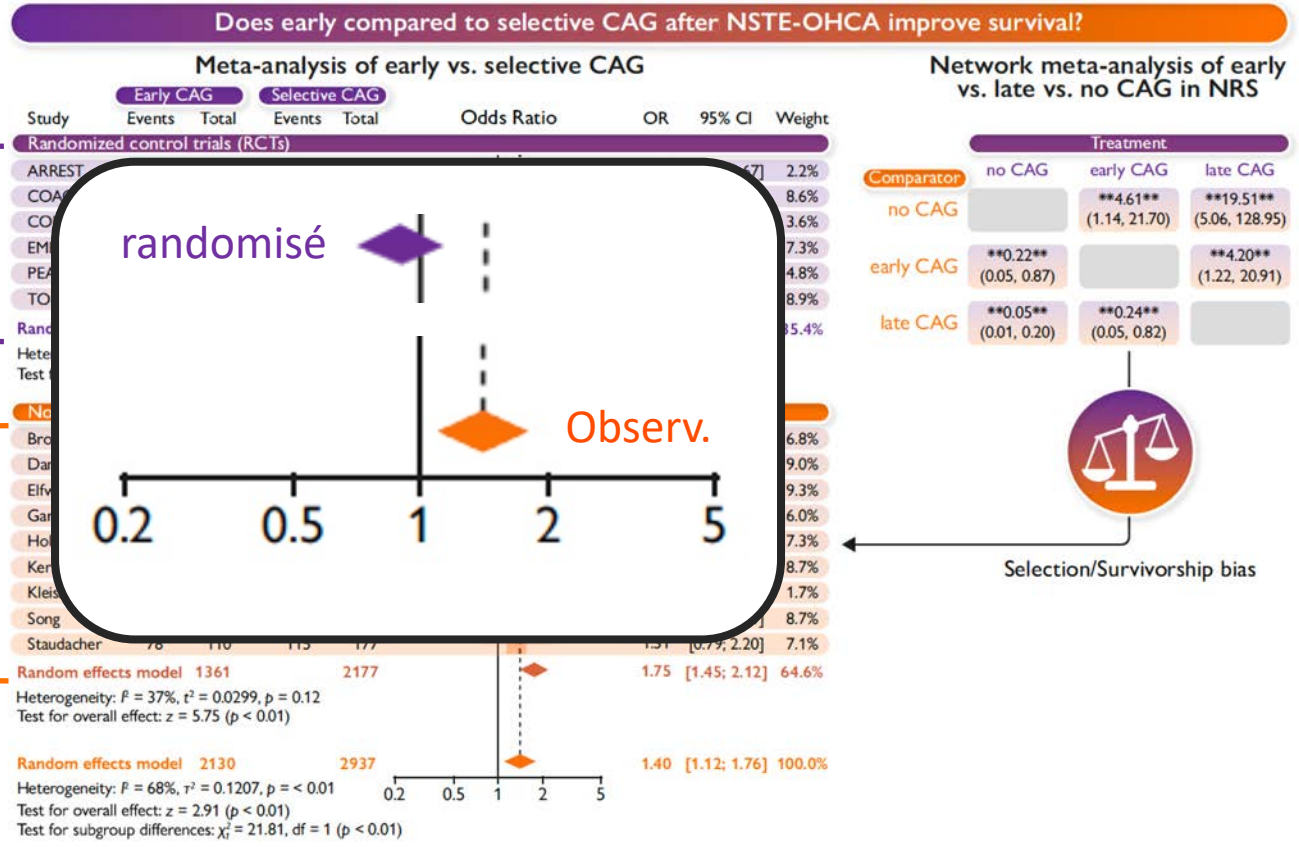
TOMAHAWK

Desch S et al. *New Engl J Med* 2021;380:1397-407

Que retenir de l'actualité - AC : **Post-RACS**

Essais randomisés

Etudes observationnelles



Heyne S et al. *Eur Heart J* 2023;44:1040-54

Practice Guideline

European Resuscitation Council and European Society of Intensive Care Medicine Guidelines 2025 Post-Resuscitation Care ☆

Place du scanner crâne + TAP injecté

Coronary angiography remains first if ST-elevation is present; otherwise, whole-body CT scan (including head, neck, chest, abdomen, pelvis, and CT pulmonary angiography) takes priority.

Nolan JP et al. *Resuscitation* 2025; 215:110809

Practice Guideline

European Resuscitation Council and European Society of Intensive Care Medicine Guidelines 2025 Post-Resuscitation Care ☆

hypothermie

2025 Guidelines

Preferred terminology is temperature control. Recommends actively preventing fever ≤37.5 °C for at least 72 h post-ROSC.

Contrôle de température ≤ 37,5°C : 36-72h

Nolan JP et al. *Resuscitation* 2025; 215:110809

Part 8: Advanced life support
2010 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations☆,☆☆

Resuscitation 81S (2010) e93–e174

2010

HT 32-34°C, 12-24h, si coma après FV

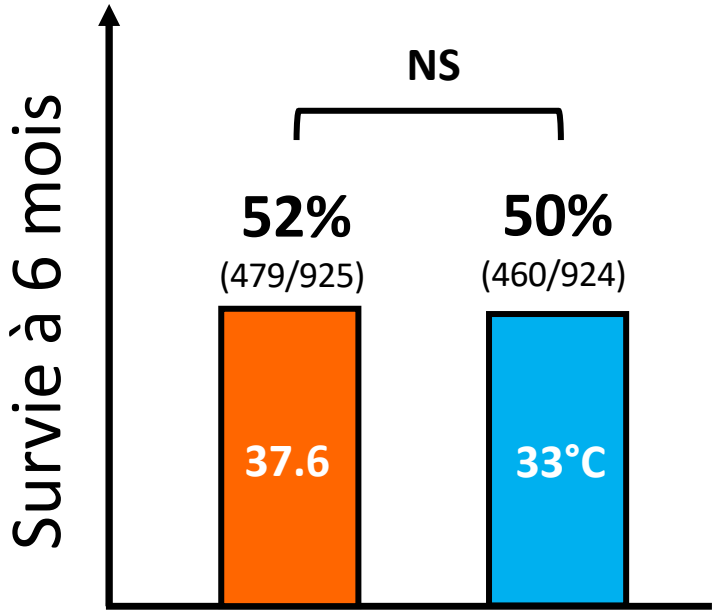
Autres rythmes et ACIH : considérer HT

Solutés froids : efficaces et sûrs

ttm2

33°C versus < 37,9°C

- 1850 patients
- 14 pays
- 80% homme
- ¾ rythme choquable



Dankiewicz et al. *New Engl J Med* 2021;384:2283-94

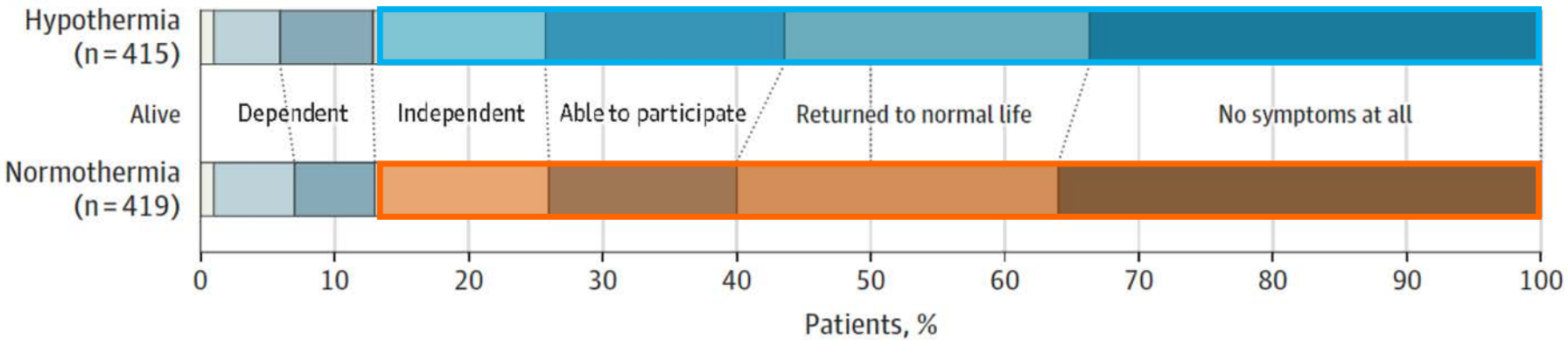
JAMA Neurology | Original Investigation

Effects of Hypothermia vs Normothermia on Societal Participation and Cognitive Function at 6 Months in Survivors After Out-of-Hospital Cardiac Arrest

A Predefined Analysis of the TTM2 Randomized Clinical Trial

ttm2

Devenir des survivants de TTM2



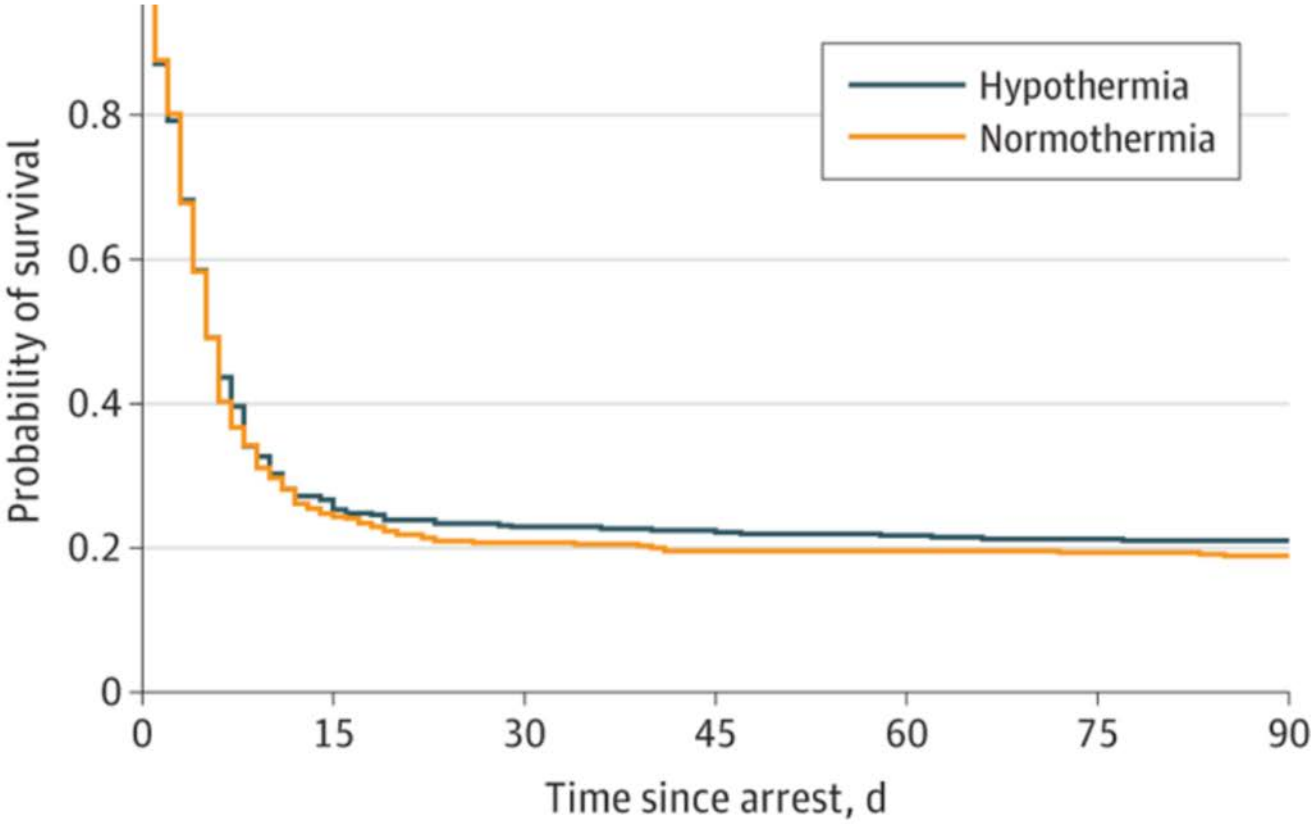
Ancillaire TTM-2

Lilja L et al. *JAMA Neurol* 2023; 80:1070-1079

JAMA Neurology

868 ACEH

non choquable



TTM-2+HYPERION

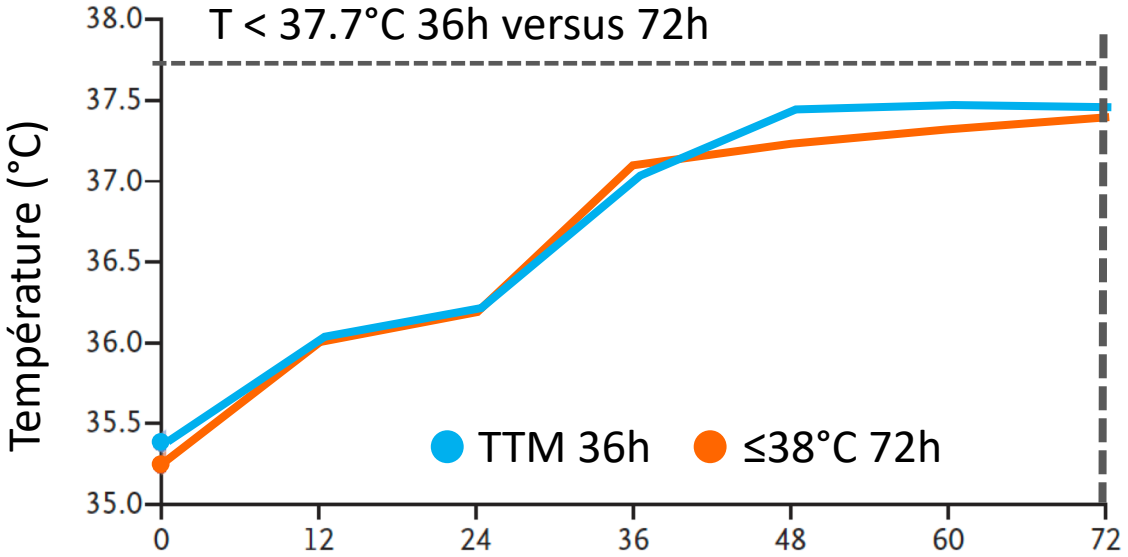
Taccone F et al. *JAMA Neurol.* 2024;81:126-133

ORIGINAL ARTICLE

Duration of Device-Based Fever Prevention after Cardiac Arrest

N=800 ACEH
85% FV/TV
50% STEMI

TTM 36 vs. 72h



Etude secondaire BOX-TRIAL

Hassager C et al. *New Engl J Med* 2023;388:888-97

Practice Guideline

European Resuscitation Council and European Society of Intensive Care Medicine Guidelines 2025 Post-Resuscitation Care ☆

Pression artérielle

2025 Guidelines

Specifies MAP target of >60–65 mmHg.

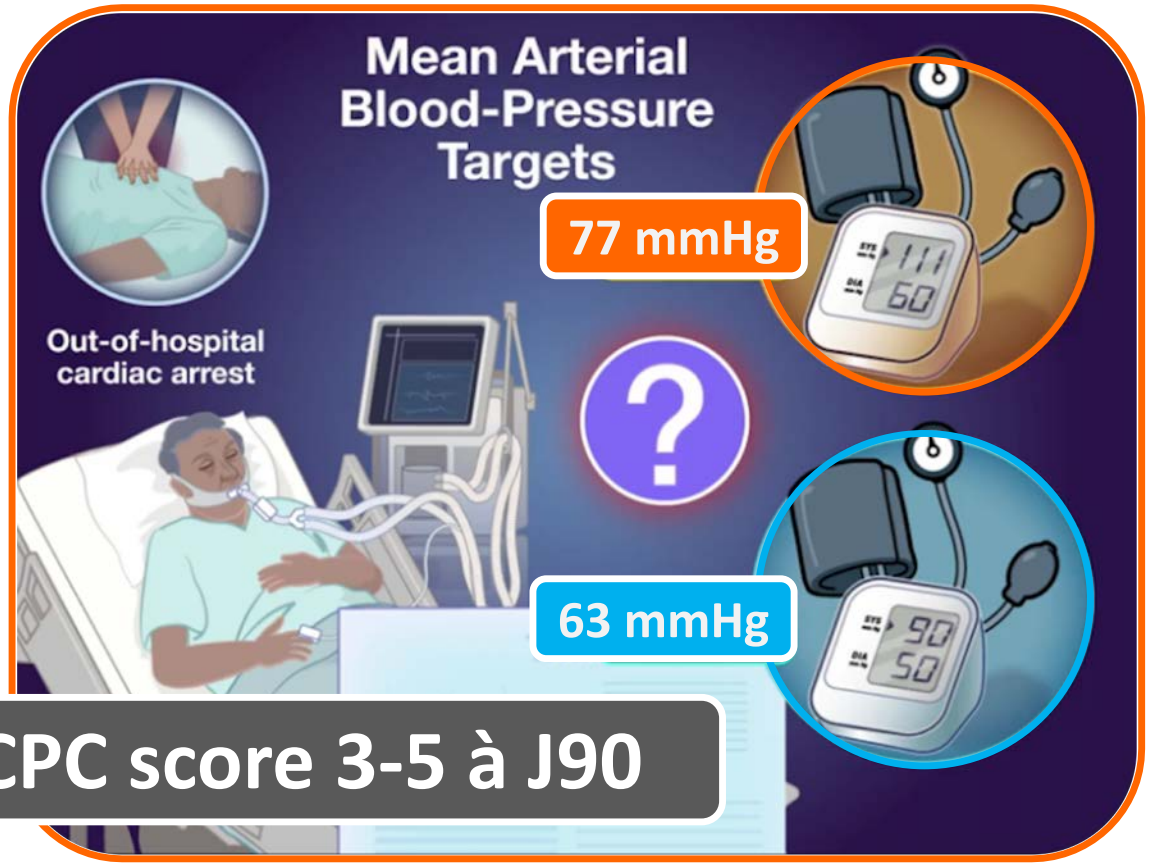
Eviter l'hypotension + PAM > 60-65 mmHg

Quel objectif de PAM ?

ORIGINAL ARTICLE

Blood-Pressure Targets in Comatose Survivors of Cardiac Arrest

Age : **62** ans
Homme : **80%**
Témoin : **85%**
FV/TV : **85%**
AC-rando: **2,5h**

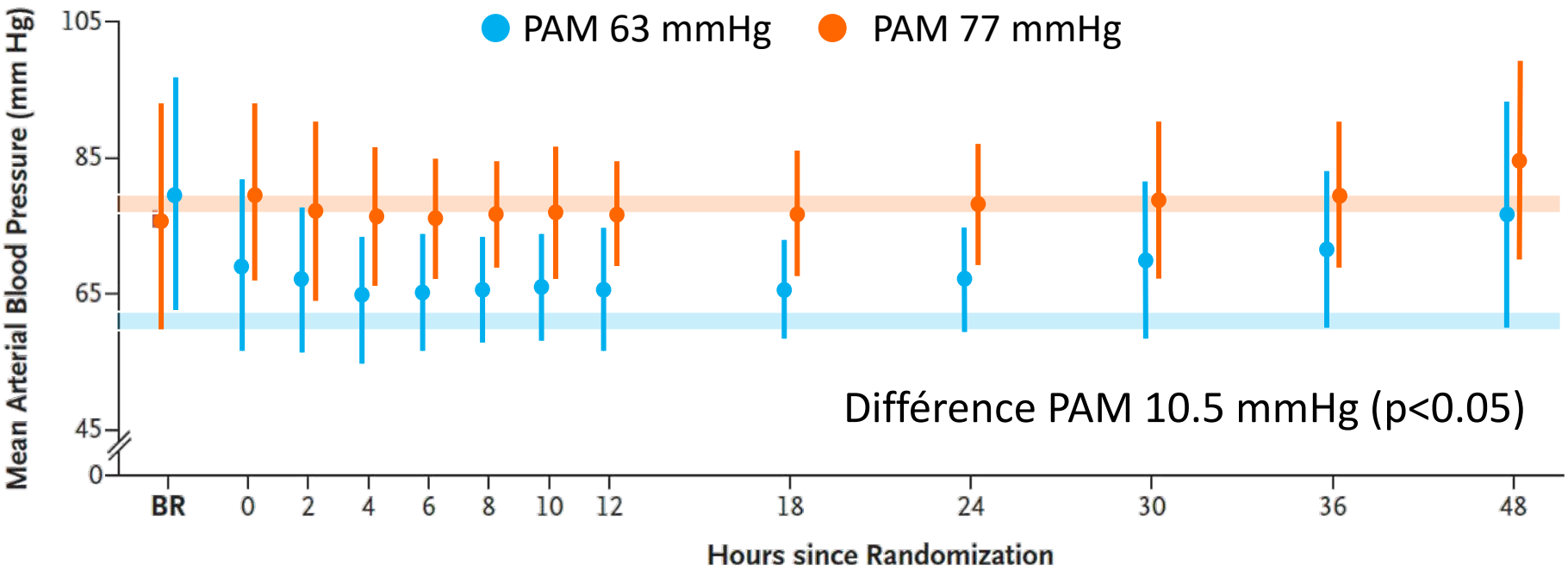


CJP : CPC score 3-5 à J90

BOX-TRIAL

Kjaergaard J et al. *New Engl J Med* 2022;387:1456-66

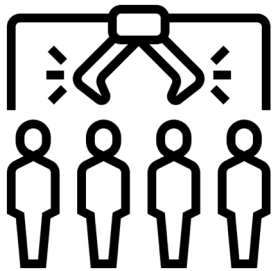
Niveau de PAM ?



BOX-TRIAL

Kjaergaard J et al. *New Engl J Med* 2022;387:1456-66

Niveau de PAM ?



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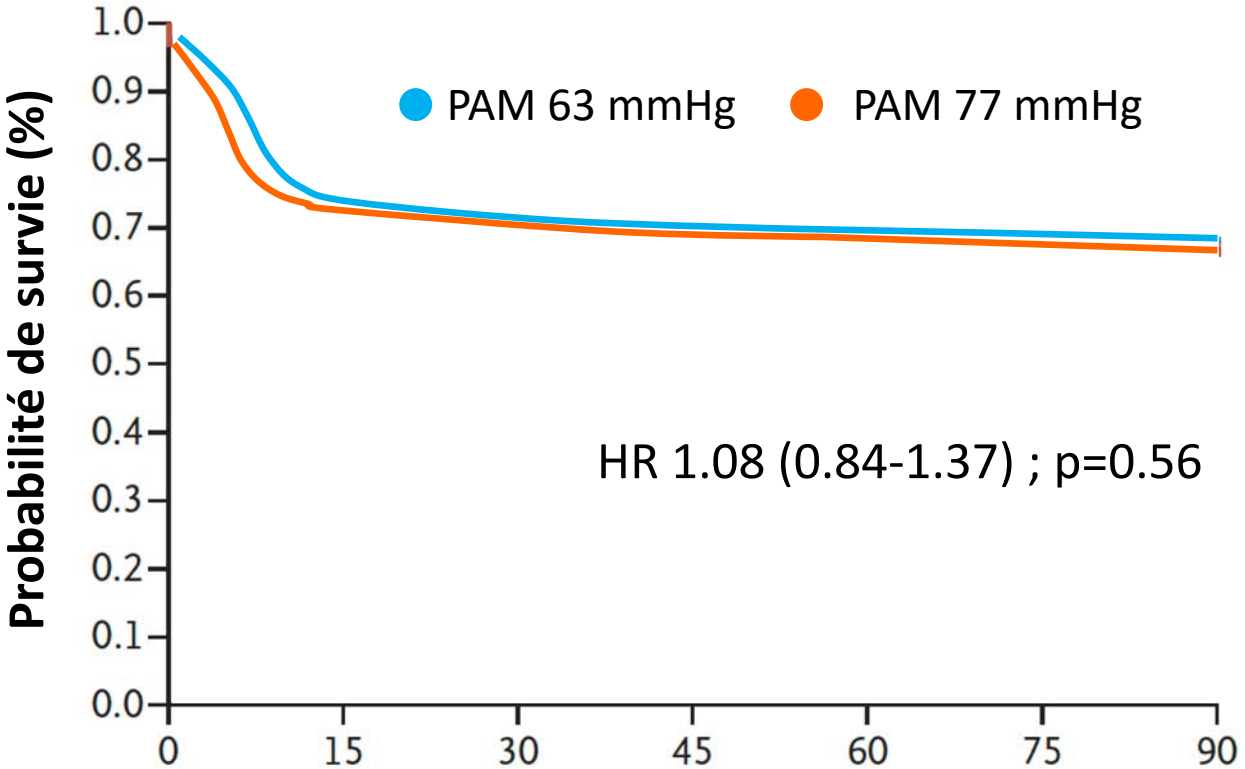


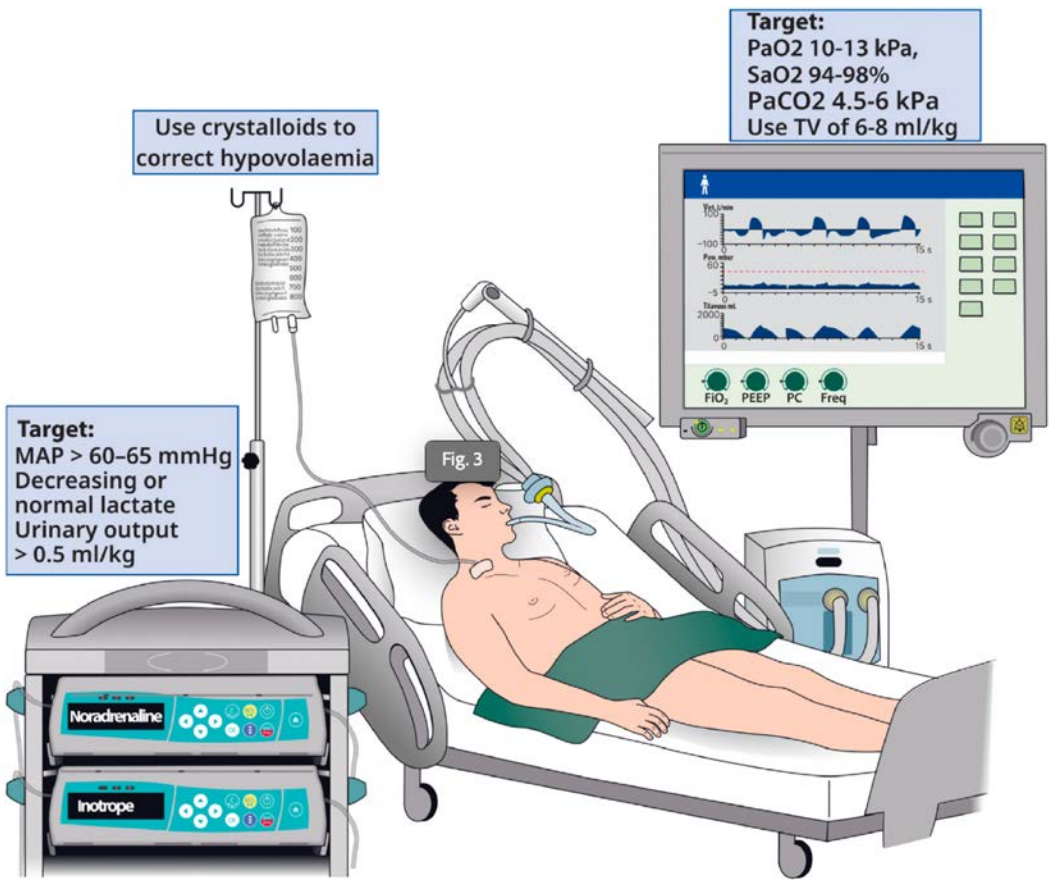
BOX-TRIAL

Kjaergaard J et al. *New Engl J Med* 2022;387:1456-66

Pression artérielle

Personnalisation de la PAM

Que retenir de l'actualité - AC : **Post-RACS**



Nolan JP et al. *Resuscitation* 2025; 215:110809

Que retenir de l'actualité dans l'arrêt cardiaque : **Conclusion**

80% des AC non choquable

Plan dur n'est plus recommandé

Changement de vecteur / FV réfractaire

Contrôle de la température > 36h